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ORIGINAL ARTICLES.

PRE-COLUMBIAN SYPHILIS AND EAST ASIA.

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Since the publication of my article on pre-Columbian Syphilis in the *Medical News*, October 31, 1891, I have received a few letters on the subject. Professor Brinton does not lay great store by such philological evidence as I have been able to produce. "After careful search," says he, "I have not found any resemblance between any American tongue and any Asiatic dialect; a few isolated resemblances do not signify anything."

Dr. Gustav Brühl, of Cincinnati, the author of "Pre-Columbian Syphilis in the Western Hemisphere" published in the *Cincinnati Lancet and Clinic*, May 29, 1880, and of an article under the same title, March 8, 1890, in the same paper says: "In neither have I tried to prove that syphilis originated in America, trying only to prove that it existed here before the landing of the Castilians. 'Abobe" is not a Nahuatl word, the Nahua called it Xanitl, the Otomics, Notletahoy. Without any doubt it was imported by the Spaniards. 'Huarache' (the sandal) is used by the Mexicans of to-day like 'Adobe', but you find it in no Nahuatl dictionary, the true word being Cactli; or we have to consider it as a corruption of the term Cuetlaxtli, cosa curtida, a tanned thing. Also the physical affinities of the Mexicans and Japanese are not so striking as Mr. Tateno seems to believe. Whether the Chinese 'Fousang' is identical with America, is an open question, by no means settled. The fact that the Inca head-chiefs considered themselves descendants of the Sun, and the Japanese, their country as the 'Sun's cradle,' is ethnologically not the least proof of the common origin of both tribes. What Tarraire affirms of the tribe of Santa Barbara speaking a Japanese dialect, must be taken with great caution. It was once believed that the Otomi of Mexico and the Indians of Eseng in Peru, spoke a dialect related to the Chinese language. We know better now. And I doubt very much if Hon. John A. Bingham was able to judge that the Indian dialects of Ohio had a great many similarities with the Japanese language. Even for a learned linguist it is extremely difficult to decide correctly such a question."

Dr. Brühl in his first article says that Oviedo claimed pre-Columbian existence of syphilis on this Continent. He also quotes from the author of the Historia Apologetica, by Las Casas, who arrived in San Domingo six years after the discovery. He refers to the ancient Quiche Indians of Guatemala, who speak of their deity as Tepeu (Syphilis). It was a token of great power and dignity to cohabit with many women; they believed that promiscuous intercourse was necessary to produce the disease. They considered syphilis as one of the privileges of the nobility. Dr. Brühl also quotes the Toltec's legend of Nanahautl, who was transformed into the Sun, and who was always spoken of as "the Syphilitic." The worship of "El Bubboso" flourished to the last days of the Empire. Their three principal syphilitic remedies derive their denomination from the name Nanahuatl (Nanahuatla, Nanahuaquahuitl, Nanahuaxochitl). He refers to the investigation of Prof. Joseph Jones, the result of whose explorations of aboriginal remains in Tennessee appeared in the Smithsonian publications, Washington, 1876. The bones he found, he declares to be of pre-Columbian origin; the burial place of some of them had been under an elm tree, 12 feet in circumference, with 260 rings of growth from circumference to centre, which indicates an age of 250 years. These Tennessee bones were subjected to a test by hydrochloric acid to determine the proportion of organic matter remaining. There was only a mere trace of organic matrix of gelatin; they were consequently "the most ancient syphilitic bones ever found." In his second paper Dr. Brühl takes up the philological side of the problem. The names of the disease among the various ancient races could only, according to him, have originated on this continent before the advent of Columbus; he furnishes plenty of arguments for his conclusion, which is as follows: "In view of the evidence I have gathered from the confessions, customs, religious rites and superstitions, the mythology, materia medica, and the languages of the natives, who will deny the pre-Columbian existence of syphilis in the Western Hemisphere? Neither Clavigero nor the host of his followers, Prof. Mac Lean included, can reason away this stubborn fact. Nor can they make us believe that it was the Spaniards who entailed this everlasting curse upon the aborigines."

There can be but three positions to take with respect to the presence of syphilis in America: Either it existed before Columbus, having its origin here, or it was introduced by Columbus, or it existed before him with an East Asiatic origin.

Professors Brinton, Brühl, Jones and various earlier authorities have concluded that it did exist before Columbus. In this case then, it must be autochthonous or else have come from East Asia. As we have sure knowledge of the existence of syphilis in East Asia long before the Europeans came in contact with it and as we know also that when the latter were inoculated with it, it developed a type as malignant as that which was transferred by Columbus from the ancient races of America to Europe, it is reasonable

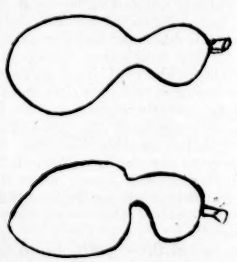
[1] I had quoted in the *Medical News*, a few Aztec words which had been given me by Mr. Tateno, the Japanese Minister to the United States and Mexico, as showing a striking resemblance to some Japanese vocables. I referred in the same article to other similarities.

to suppose that the disease in both situations, pre-Columbian America and East Asia, *had the same degree of attenuation*. This may be considered as one of the facts which make the relationship of America and Asia, at least, probable.

Prof. Stillé believes with me that America was not a New World to the Asiatic Orientals. "I have long since felt persuaded," says he, "that America was peopled on the North by the Tartars and Japanese chiefly; in its middle parts by the Chinese; and that the same race which built the vast temples of Hindostan, erected the monuments of Oceanica, Yucatan, Mexico and Peru. No doubt, it seems to me, that syphilis was carried east to America, centuries before it was transported from America to Europe. In Asia it did not travel westward, partly because there was little communication in that direction, and also because between the further Orient, where it had perhaps immemorially existed, and the west of Asia and Europe there intervened the great Mohammedan races whose seclusion of women was a strong barrier against its propagation."

I beg permission now to pass somewhat abruptly to another point of view, the archæological one. Some of the facts which I shall communicate were gathered by myself during my sojourn in Japan. I do not know whether they have ever been referred to by any other observer. They show, I believe, a strange relation between mound building and serpent worship in America and East Asia. I do not think that the following lines are out of their place in a paper on pre-Columbian syphilis. The question of the relationship between the American and Asiatic races, must of necessity have a paramount importance in a study, in which one of the queries is: did the disease come from East Asia or not?

Twenty-eight miles from Tokio, in Gumma-ken, near Takasaki, there are several very ancient mounds; they have the shape of Japanese wine-gourds



(hyotan). From 1,500 to 2,000 years is their supposed age. My venerable friend, Mr. Osaki, of the province of Isé, where such constructions were familiar to him, being on a visit to Takasaki, discovered such a mound on a farmer's property. Mr. Osaki knew how to take his bearings in such affairs; he effected an entrance through the smaller division of the building, where he found some evidences of a wooden doorway long gone; he discovered also a stone passage way leading to the larger compartment. The smaller compartment contained the remains of several bodies, the larger one a stone tomb. Prying off the stone lid of that receptacle, which was shaped like a Japanese trunk, he found a body imbedded in the stone, its head to the North, as usual. Swords, gold rings, helmets, bowls, necklaces and some finely polished agate stone ornaments, of different colors, in the shape of rings and tubes were found with the body. These relics, I am informed, are now in the National Museum at Uyeno.

I regret not to be able to remember the date of Mr. Osaki's visit to Takasaki; I think that it must have taken place a short time before the Meiji era.

The gourd-shaped mounds, says Mr. Osaki, some of them measuring 150 feet in length, and 30 to 50 in height, are found in many parts of Japan, principally in Isé, Yamato, and Yamashiro, and in various situations. It is his opinion that they are what is called there, "misasagi," that is, imperial tombs. The presence of the gold trinkets, which, at such an early date, could have belonged only to the very great, and the fact that in one case, at least, the body had been preserved in vermilion, speak strongly for his view. Mr. Osaki also thinks that the smaller compartment of these mounds is the burial place of the attendants or relatives of the Emperor; in those days the custom still obtained to bury with the prince, his servants, alive.

It has long been surmised by the student of mound building in Ohio, that these mounds also are burying places of important persons. It could be shown in one case at least, that a human sacrifice had been a part of the funeral ceremonies. A connection between this architecture and serpent worship has also been established. In the so-called serpent mound of Ohio, the figure three seems to be mystically conspicuous; its triangular head points to the three streams[2], its body has three folds, its tail three coils; thus the shape of the body gives us three times three.

The typical serpent in the ancient Japanese worship was a nine-headed snake, and thus exhibited the sacred number three multiplied by itself: the holy San-san-ku-do (three times three are nine.) For those who are more than superficially interested in Japan, I give the following details with regard to the origin of serpent worship in that country. Thirteen miles from Nagano-ken in Shinano, there is a high mountain, always snow-topped, which was already held in deep reverence during five long-lived generations preceding Jimmu-Tennô, who himself lived about 660 years before Christ. Tenshogodaijin, the greatest of the Japanese deities, the Goddess of the Sun, horrified by the sight of the world's wickedness, went and hid herself in a cave of that holy mountain, Amano-Iwaya, the cave of Heaven. Thus, the world fell naturally into darkness. The counsellors of the departed queen now met, and cast about for some means of bringing their mistress out of her concealment. It was hoped that the charms of music would answer the purpose; in pursuance of this resolution, all the choirs of the world were called together at the mouth of the goddess' cave. She put the door ajar to listen, as the plotters had expected; they at once pulled the door off and carried it away to Toga-kushi, where they hid it in safety. A notable temple is still there as a monument of these mythical events. From the hiding place of "the hidden door" (Toga-kushi), a large snake with nine heads, emerged, and at the sight of the guardian, took refuge

[2] The soul must pass over the river of the three paths, the Japanese river Styx. The paths lead respectively to Paradise, Humanity and Perdition.

in the cave. Being there treated with the utmost consideration and especially well-fed, he grew so large that he could not get out again. It was from this time that the snake was worshipped as a god, and an almighty god at that, for it sends rain when properly asked for it, deserving well the name of the *god of irrigation*.

There are hundreds of snake chapels all over the land, especially in small coast villages, besides this large temple of Toga-kushi. They are usually from five to eight feet square. Upon an altar stands a painted serpent, in wood or earth, with head erected as in the act of striking. As to the great temple, it is entitled to receive the visit of every Japanese, at least once in his life; for are not in this slippery god the solar divinity and the serpent divinity united?

It is a curious remark that the metempsychosis of Japan recognizes only one exception to the general receptivity of nature for the departed souls of men; the snake is reserved for divine spirits, and its body can never be the tenement of what has been formerly humanity. No woman is allowed to go to the great temple; this also is an evidence of the great regard in which it is held. Among the animals worshipped in Japan, there are many represented with nine heads or nine tails. As already stated, three times three is a holy number. It is even essential to the holiness of marriage; the passing of the wine cup from the person who has negotiated the union, to the bride and groom, three times round, with the words, san-san-ku-do, completes the sacrament.

In any transaction in which the number nine has to be used, they will say, san-san-kudo, to make the pledge particularly binding. It is not improbable that there is a close connection between their worship of the serpent and the dragon worship of the Chinese.

No one who follows with interest the study of our ancient races can find these remarks entirely superfluous. There is little doubt but that the importance which the sun and the serpent hold in the religions of pre-Columbian America, is rooted in traditions brought to this country from what, as time and observation go on, we become more and more inclined to consider as the colonizing mother of our primitive populations.

THE CAUSE, CONDITION, PREVENTION AND CURE OF DRUNKENNESS

A Sabbath Evening Address

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For an address upon the *cause, condition, prevention and cure of drunkenness* we find in the sacred volume many appropriate texts,—"Who hath woe? who hath sorrow? They that tarry long at the wine." "Wine is a mocker, and strong drink is raging, and whoso is deceived thereby is not wise." "Look not upon the wine, for at the last it biteth like a serpent and stingeth like an adder."

Drunkenness reaches back to the earliest records of our race. Sacred history tells us that the ninth generation from Adam was so besotted and debased that all mankind, save only Noah and his family, were destroyed, and that notwithstanding this terrible judgment, soon after the waters of the great flood had subsided, he planted vineyards, made wine, got drunk, and cursed his son with a grievous curse for beholding the nakedness of his debauch.

All down the ages, in palace and cottage, men have read in the handwriting of the Almighty, "Thou art weighed in the balance and art found wanting." All alike have found wine a mocker, and that whoso is deceived thereby is not wise. All down the ages fitful efforts have been made for the prevention and cure of drunkenness; but while humanity has been slowly uplifted, and sobriety has steadily gained ground, alcohol still remains the great destroyer of life and all that makes life desirable.

Let us see, if we can, why an evil so great and so apparent continues so persistent and so widespread.

Alcoholics are most seductive lethals, giving temporary relief from pain and anguish, meanwhile causing and covering disease until it is often beyond cure. They cause disease both through their chemical affinities and therapeutic action, and their continued use producing toleration and demands increased potations. Both the habit and the disease produced tend to overwhelm will power.

The will dethroned, and all the conditions for which the lethal is taken increased, the drink habit reigns supreme. Thus thousands drink to drunkenness, when all around they behold men of genius, culture and piety, stronger men than they, who have walked in the pathway they are treading, until they are not only physical wrecks, but until, through degradation of the cells through which spirit acts, many have become irresponsible maniacs.

The causes of drunkenness lie largely in the relation of spiritual and physical life, their mode of connection and their constantly exerted reciprocal influence, and the difficulties in their investigation are found in our limited knowledge of life, and the bond that unites soul and body. Yet we know that whilst united, the soul acts through the instrumentality of the body, and is the stimulus to the development of the cells through which it acts, and we know that, by a law of spiritual life, the spirit is transformed into the image of its worship. If it worships the God of truth, justice and mercy, the Infinite Love, it is lifted ever nearer to Him. If it bows down to Bacchus, it becomes as debased as the god of wine.

Judging from mental and moral action in certain conformations of the brain, and after injuries of various parts of the great nervous centre, we conclude that the different attributes of the soul act through special nerve cells, to which they are the normal stimulants, and that their healthful and harmonious, or inharmonious and faulty development, are largely dependent upon their properly regulated activity. Perhaps nothing strengthens this thought more than drunkenness. Though the average drunkard may be an easy, good-hearted fellow—a typical Rip Van Winkle, many brilliant men, men possessing every variety of talent and every shade of character, men renowned in every profession and vocation, yielding to this temptation, have all alike become helpless, hopeless drunkards.

It is evident, then, that we must seek the primal cause of drunkenness in the imperfect or irregular development and nutrition of the cells through which the conscience and will act. It is a law of the physical economy, applicable alike to every part, that regular, systematic exercise, use, with appropriate intervals of rest, not only invites nutrition to the part, but stimulates appropriation, replacing the cells

worn out by use, keeping the part strong and vigorous, and moulding it to definite purpose. Mental and moral action is the stimulus to the cells through which the intellectual and moral man acts, and develops them in harmony with the laws whereby muscular and glandular activity develops muscle and gland.

While we may not be able to demonstrate the changes these cells undergo through the activities of a spiritual life that tends to drunkenness, as neither microscopy nor chemistry reveal any change that can be called disease, prior to drunkenness, we know there is an acquired or inherited type of tissue that impels to alcoholism. Disease is never hereditary, but only cell formation, tissue types, prone to defective action and specific degeneration. Abundant observation proves that, in the predestined drunkard, there is some defect in that portion of the organism through which will and conscience act, and that it is associated with every degree of general health, and usually capable of correction.

When the Creator breathed into vitalized matter a spirit that can think, and reason, and will, the body became clay in the hands of the potter, and in considering the great problems of life, we must grasp both ends of the chain—the one that is obedient to law, and the one that is a law unto itself; the one that binds us to time and the one that links us to eternity. Spirit of His spirit who created all worlds, working in harmony with His laws, the spirit of man may mould the body through which it acts into a fit instrument for its noblest aspirations, while yielding to the lusts of the flesh, a gross animalism will degrade us to the level of the beast.

While reason and conscience rarely fail to admonish those who drink, a will force that neglects or refuses to regard their warning voice, permits them to "sow to the wind and reap the whirlwind." Drinking again and again, saturating the body with a poison that degrades the whole organism, the organ of will meanwhile becoming more and more easily hebetized, and exercising less and less power, man drifts, the helpless victim of a relentless destroyer.

Wrong-doing continually resisted fortifies the soul until it can say to every temptation, "Get thee behind me, Satan;" while to those who persistently yield to temptation, "trifles light as air are burdens too heavy to be borne." All that strengthens the will and uplifts the soul gives it power over the flesh and the lusts thereof. All that brings its hopes and aspirations, its life, into greater harmony with its spiritual Father, is evolution. "As many as are led by the Spirit of God, they are the sons of God." "Blessed are they who do hunger and thirst after righteousness, for they shall be filled."

While a strong animal life is essential to a strong spiritual life, the spirit must keep its appetites and passions within due bounds. It must be victor or victim.

Good authority pronounces 60 per cent. of the remote or predisposing causes of drunkenness hereditary, 20 per cent. due to injury or disease, 10 per cent. consequent upon nerve shock, and 10 per cent. produced by various other causes.

The exciting causes are physical, mental or moral suffering, any pain or strain, association or surrounding that tends to override conscience and will, and seeks relief in anæsthesia, rather than through the strength gained by the healthful activities of a nobler manhood. True heroism conquers obstacles and overcomes difficulties, and every victory gives strength for nobler achievements. Life is a battle with all, and in all

"There is always somewhere a weakest spot,"

and no man is stronger than this weakest spot. It often lies in the temptation to an intoxicant that enables man to give rein to the pleasures of the passing hour, without a care beyond, and to find relief from painful or depressing sensations or emotions of soul, or mind, or body, in its lethal action. But it is a lethal that, as was remarked long ago, "maketh a man to forget his brethren, and draw his sword against his best friends;" a lethal that destroys self-respect and self-control. When the will has once permitted the "mocker," alcohol, to control it, it is ever after anæsthetized by the smallest quantity of the poison, no matter for what purpose taken. When he who has once been a drunkard yields to temptation, he drinks to drunkenness.

I once had occasion to prescribe an alcoholic for an intelligent and conscientious old physician. He said, "I don't like to take it, doctor, I was once a drunkard." "Oh!" I replied, "that was thirty years ago. You need not be afraid." When I called the next morning he said, "Never prescribe alcohol again for a man who has once been intemperate. After you left me last evening I felt the same impulse to drink to drunkenness that moved me years ago, and had I not had strength to throw the bottle out of the window, would be drunk now."

Not only is every part of the body developed in harmony with its activities, but developed peculiarities are transmitted from generation to generation, and in no part of the body is heredity more marked than in that through which the spirit acts. The degeneration may not always be the same, but the spirit bears its impress as truly as the song of the singer the impress of his vocal organs, and no plea of ignorance will change the laws by which the Almighty governs the universe of matter, organized or unorganized. "I the Lord thy God am a jealous God, visiting the iniquities of the fathers upon the children unto the third and fourth generation of them that hate me (disobey me), and showing mercy unto thousands of them that love me and keep my commandments." "Of thorns men do not gather figs, nor of a bramble bush gather they grapes."

When we have disregarded the dictates of conscience and reason, trodden under foot the will, and submitted to an ungoverned animalism, we have debased the "temple of the holy ghost," the home wherein the spirit dwells, the physical organism through which it acts, and not only shall we reap what we have sown, but we will transmit to our children organisms that will give vice an easy victory over virtue.

Acquired predisposition to intemperance arises from various habits and surroundings, as well as from lack of self-respect and proper regard for the opinions of mankind. All social drinking, and all vocations that tend to degrade and debase are predisposing causes. Those who go in the way of temptation feel the need of a lethal that will enable them to hide themselves from themselves, when, like the hunted ostrich, with his head beneath his wing, they fain believe their sins covered out of sight. Take an illustration. "He that killeth by the sword must be killed by the sword," is not an unmeaning platitude.

The rum seller invariably follows in the footsteps of his victims. Handling, tasting, drinking, making others drunken, notwithstanding the horrible examples about him, he is soon numbered among them, and by his surroundings and his heredity he taints the whole line of his posterity. There is a grim justice in the laws of the Almighty.

In illustration of the effects of an honorable vocation we need only refer to the railway service, with its 22,000 injuries, and 2,500 deaths during the past year, many of them consequent upon the confusion incident to the use of alcoholics. Railway management recognizes its danger and most companies have rigid rules against the use of spirits by employees, though they rarely reach the management. Yet despite these rules, the irregular life, the long hours of duty, with their sense of danger and intense mental tension, strongly tempts to some anæsthetic that will give temporary relief, and alcohol is the most convenient and popular. The frequency with which they yield to temptation emphasizes the importance of ample time for rest and repair.

Nationality is a predisposing cause of drunkenness because it marks types of mental and moral development of civilization. That civilization is highest which develops the whole man, that makes a strong animal life a fit medium for the activities of a spirit that can mould it to its highest purposes. In the highest attainable civilization there can be no drunkenness. "Righteousness will cover the earth as the waters will cover the sea." The savage has not learned to govern his appetites, to subdue his passions and to keep himself within due bounds, and he does not know the evils of intemperance. Nations whose subjects are deprived of independence and oppressed, having little stimulus to self-control, and mental and moral culture, with strong temptations to drown life's sorrows in the sparkling bowl or foaming mug are prone to intemperance.

For illustrations we need only look at the Indian on our frontier, and glance at the names of those who run the distilleries and keep the grog-shops of America.

Though our American life is full of the unrest and anxiety that tends to drunkenness, the self-control that must characterize all successful popular government makes us the most sober people on the face of the earth. The large proportion of our drinking is among our foreign born population, and in our higher civilization the drink habit reaches it acme in the anxieties of the political arena and among those who are "so English, you know," so French, so German, who like children seek to seem larger than they are by aping the follies of those of older growth.

Time forbids further notice of the many exciting causes of drunkenness, and compels us to hasten to preventive measures. However brilliant cures, if prevention is ever better than cure, it is in drunkenness. Finding its primal cause in a weak power of resistance, made weaker every time it yields to temptation, the drunkard is only safe when "delivered from the body of this death" he ceases to "find a law in his members warring against the law of his mind, and bringing him into captivity"; when he has found a home in a "land without a storm."

So long as in our human weakness the great regulating powers of conscience and will are over-ridden by alcohol, so long as sickness and sorrow, pain and anguish tempt men to seek relief in that which at last "biteth like a serpent and stingeth like an adder," so long as rum, acting on unstable organisms, destroys self-respect, develops recklessness, and tends to every type of debasement, and is the mad force that has impelled the resistless mob from the days of Sodum until now, the interests of the State, the church and humanity, all demand as a preventive, *prohibition*, and a prohibition that will prohibit those who are "not wise" from seeking relief through an oath in an anæsthetic that leads to drunkenness. Whether alcoholism is a weakness, a disease or a degeneration, it is the great curse of humanity, and the State is bound to use the same care for its removal that it uses for the removal of small-pox. Until it has destroyed susceptibility to septic disease, and applied the remedy to every human being, its duty is clear, and while it is renewed in every new-born life the duty is perpetual. Alcohol diseases and destroys a larger proportion of mankind than septic disease, and until susceptibility to this great intoxicator is forever destroyed, it is the duty of the State to corral the destroyer. While we protect the tempted, by removing the temptation, we must destroy susceptibility. The chief means to this end is education. By education we do not mean simply teaching that whisky is bad, that drunkenness is bad, that dram-selling is bad nor that alcohol ($C_2 H_6 O$) through its chemical affinities will deoxidize the tissues, coagulate the albumen of the body, and destroy its hemaglobin, that it will produce indigestion, with all its train of sequences, hob-nail liver, granular degeneration of the kidneys, tuberculosis of the lungs, and every form of nervous and mental disease, that it will arrest physiological metamorphoses, the sign and scource of health, and make the drunkard the opprobrium of both the physician and surgeon, but an education that will develop power to avoid what is wrong, and to do what is right. Wrong-doing comes more frequently from lack of will force than from lack of knowledge. We must not only teach our children to sing, "Have courage my boy to say no," but through proper education we must develop in them an organism that will enable them to resist every appearance of evil.

In our misguided love we too often indulge the whims of our children, and prepare them to "float on flowery beds of ease" when we know "Jordan is a hard road to travel," and that they must fight if they would win. "Train up a child in the way he should go," give him moral force, "and when he is old he will not depart from it." Education that develops rightly directed, persevering determination, gives more than genius. It gives a strength and nobility of character that instead of dodging behind anæsthetics and opiates conquers success, and it does have a logical and physiological basis.

The church, a religion that teaches the incarnation of God in humanity, and develops spiritual strength through communion with the All Good, that inspires loftier aspirations and to a nobler life, assures both physical and spiritual evolution. It prevents intemperance and saves from intemperance by impelling its votaries to follow the advice of Cromwell to his army —"Trust in God as though He would do all things, but fight on as though He would do nothing." It saves from drunkenness by enfolding the drunkard in its arms of love, and strengthening him through a human sympathy made divine through the love of Christ. But if its members gather up their garments and pass by on the other side lest they

suffer defilement from contact with one who has known this human weakness, the church will be defiled and the poor inebriate who was seeking salvation through its portals will fall, not because the religion of Christ cannot save, but because there was so little of its life-giving love in His professed followers.

Temperance organizations, like the church, are both preventive and curative. They teach the young to make straight paths, and say to the drunkard, "stand up, thou art a man." They develop both the importance and the power of resisting temptation, and have been and are, a great factor in moulding a better public opinion, and uplifting humanity. But for the Washingtonians, the Sons of Temperance, the Templars of Honor, and the ever faithful W. C. T. U., drunkenness would fill the land.

We sometimes hear it said in the olden time when liquors were kept upon the sideboard and drank by all there was less drunkenness than under prohibition and the teaching of temperance societies. Neither logic nor statistics confirm the assertion. It is the argument of the rum-sellers, who "by their craft, have their wealth."

And what of such reformatories as the prison and the rock-pile? They are relics of the unwisdom and barbarism that sought to cure the insane with faggot and fire, the straight jacket and the lash. They increase the sense of degradation and the demand for lethals. They are the methods of an accursed traffic that seeks to throw all the odium upon its victims. The only excuse for their existence is, they protect society against the madness of drunkenness.

What of reformatories and asylums for the treatment of habitual drunkenness? Just now it is the fashion to condemn them as failures. Reports made months and years after discharge both in Europe and in America, show from thirty to seventy per cent. of those treated for six or twelve months, cured. That the intemperate may be protected against themselves and be saved to the State; that society and the State may be protected and enjoy the benefits accruing from sound lives, the several States and the national government should establish restorative homes, where those convicted of drunkenness before the courts, those pronounced habitual drunkards after proper legal investigation, and those making voluntary application may be received and given the mixed physical, mental and moral treatment essential to their condition, and if, as we have shown, drunkenness is largely consequent upon a deterioration of the physical organism, and especially some part of the brain, intelligent treatment, adapted to each individual case, will save a large proportion of its victims. And surely when the State and national government receive, through licenses and taxes, the price of blood, they should do what they can to cure the drunkard.

Perhaps I may be expected to refer to what is known as "the Keeley cure." If our view of drunkenness is correct, and it does not fear successful contradiction, it cannot be cured by a fortnight or two of treatment with drugs, but its victim must heed the advice of the physician to Lady Macbeth "therein the patient must chiefly minister to himself." Keeley has done much good by his persistent advertisement of the great number of distinguished men, honorables, lawyers, doctors, divines, etc., who have become drunkards, and from the vast income he receives from his "cure," he has demonstrated in a practical way, "who hath sorrow," and that alcohol at last "biteth like a serpent and stingeth like an adder." For the past year he has been persistently advertised by a great Chicago daily in much the same way that a few years ago (1878) it advertised D'Unger's red cinchona cure, but D'Unger died in the gutter before he got up a boom. The Keeley cure was brought most prominently before the public in a brilliant article in the *North American Review* from the pen of Col. John F. Mines, who says he went to reformatories and they failed to cure him, but Keeley promised me a cure and *I am cured*. Unfortunately before the ink on his article was dry he died at Blackwell's Island of drunkenness. I suppose we all have some excuse for our failures. In the next number of the *Review* Keeley explains that Col. Mines was peculiarly unstable and that he never had any hope of him. Over whatever road he may have reached the goal, in every man who has become a drunkard there is always what is known as a state of unstable nervous equilibrium, and persons in this condition are always more or less benefited by any treatment that is mysterious and impressive. The methods practiced at Dwight are full of hypnotic suggestion, and shrouded with all possible mystery, while they allay nervous irritability, give tone to the organism, and carried to toleration produce positive impressions. As in the case of Mines, they make the patient feel that something is being done, and so, for longer or shorter periods, produce happy results. But he who putteth on the armor of righteousness should not rejoice as him that taketh it off.

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But what is new, what is true, what is enduring in the "Keeley cure?" We are told it is a secret. Science wrests all secrets from both nature and art. *A Secret!* Whether Keeley knows little or much, who have been his teachers? The great and good men in the medical profession, in the interests of humanity, have made known all their discoveries. The physicians and surgeons who treat your injuries and diseases, are debtors to their predecessors and colleagues. Freely they have received and freely they give. Physicians know that secret nostrums, like "the bichloride of gold cure" contain no gold except what goes into the pocket of him who knows enough to keep and advertise his secret.

In his first Chicago address Keeley said he withheld it from the profession because if put into their hands they would destroy its efficiency. Will wisdom die with him! The important discoveries of the profession, painless surgery, bloodless surgery, antiseptics, all that are valuable have had their bounds of usefulness enlarged, while its pathway is strewn with the skeletons of secret nostrums.

Keeley says drunkenness is a disease consequent upon the drink habit. Herodotus said 400 years B. C., "In drunkenness both the body and mind are sick." It is a disease, as we have shown, of every fibre of the body, of every attribute of the soul, but what of the habit that permits of its development? And in what disease is it possible to grind out health with so many turns of the crank, so many "shots" and so many "dopes" for so many days. Every disease and every case of disease demands an individual diagnosis, prescription and treatment.

Most of those who go to Dwight have been men of character, whose business and social interests present strong incentives to a better life; men who are tired of the bondage of alcohol, who are willing to confess

their weakness, to go anywhere, to do anything, to give all they have for a return to sobriety. I heard a minister say a few weeks ago, when inviting persons to the altar, "when you are willing to arise and come to the altar you are half saved." When the drunkard has started for Dwight, when he has said by the grace of God I will be saved! he is half saved, and removal from old associations, the worry of business and the turmoil of life, is a large part of the other half. After a fortnight's treatment, through the impress of his resolution, his surroundings and his medication, in the joy of his heart he feels like shouting with Col. Mines, "saved, saved." Who has not heard the convert at the altar cry, "Bless the Lord, Oh my Soul!" Who has not known him when clad in the armor of some temperance organization rejoice in his strength and salvation. When after three week's treatment at Dwight, if all rules have been obeyed, the drunkard is "graduated," and those who have obeyed orders are pronounced cured and are told they must not drink again, that if they do they need not return. Does not the church and the temperance societies give the same advice, only the church adds "seventy times seven," and continued prayer for deliverance from evil.

In his last Chicago address Keeley is reported to have said to get drunk and to become a drunkard is no more immoral or disreputable than to get typhoid fever, that drunkenness has no hereditary or predisposing causes, but is merely a habit acquired by cultivation. To cultivate a habit that leads to the deep damnation of drunkenness, without any predisposing or hereditary impulse, would seem the height of immorality, fully warranting the assertion of St. Paul, "Be not deceived, neither fornicators, nor idolators, nor thieves, nor drunkards shall inherit the Kingdom of God." He condemns physicians, temperance organizations and churches, who do not approve his theories and methods, when the very name of his cure is a fraud—"Bichloride of gold cure" that probably does not contain the sixtieth Hannemannic dynamization of gold.

He advises his "graduates" to form clubs and to meet and strengthen each other in the new life they are striving to lead, and may the blessing of God be with every such club, and all its members. But has not the church through all time been just such a refuge from human weakness and temptation? Has not its cry ever been "Ho! everyone that thirsteth, let him come and drink of the water of life, without money and without price," and has not that been the work of all temperance organizations, but more than that they seek to save men from drunkenness and to lift humanity above the plane of temptation. Be not deceived, there is no highway to holiness. They who have permitted drunkenness or other debasement, have suffered physical, mental and moral degradation and henceforward they must "watch lest they enter into temptation." All down life's pathway they will hear syren voices luring them from the way that leads to the Celestial city.

The Keeley institutes seem to make a specialty of ministerial endorsements. With all due respect for the clergy, we believe since the dark ages, when the practice of medicine was largely divided between monk and barber, divinity and medicine have been permanently divorced. While the doctor of divinity seeks to comprehend the abstractions of metaphysical theology, moral science and the power of love, he knows so little of the physicial man, "fearfully and wonderfully made," and of physiology and pathology, therapeutics and practical medicine, that his endorsement of a secret nostrum would seem a valueless assumption.

Every fibre in the warp and woof of humanity groans under the curse of intemperance. It fills insane asylums, poor-houses and penitentiaries. It means poverty and desolation, crime and degradation. It means once happy homes turned into hells, and widow's tears and orphan's sighs. It means untold physical, mental and moral agony, and the annual destruction of hundreds of thousands of lives, and of all that makes life worth living. It means forfeited inheritance to the kingdom of God.

If any man believes he has found a remedy for its unbounded woes, a remedy that will cure 95 out of every 100 drunkards of their drunkenness in three weeks, giving health and peace, hope, joy and salvation, to millions beyond his reach, and refuses to give it to the world, we need not say what manner of man he is, but only that he has no kinship so Him who for the salvation of his race could say "the foxes have holes and the birds of the air have nests, but the son of man hath not where to lay his head."

But I may be told Keeley sends his medicines to physicians in various parts of the country and tells them how to use it. If suits are accumulating against the principal for injuries caused by machine treatment with powerful poisons, if instituted against his agents, what jury would accept from a physician who is expected to know the character, strength and range of every medicine he uses, the plea: "I don't know what I gave, but it was something one Dr. Keeley said would cure."

When then is the best treatment for drunkenness? Give any physician, who has made the action of alcoholics a special study, a quarter section of land, with suitable buildings and absolute control, and let him treat each patient according to his idiosyncracy and pathological conditions and he will save a large proportion of those who are going down to hopeless drunkenness. He will prescribe such treatment as will create a distaste for alcoholics, allay irritability and give tone to the nervous system. He will remove from the organism as rapidly as practicable, by massage, Turkish baths, sudorifics, diuretics and cologogues all devitalized matter, at the same time improving the appetite and digestion, and supplying an abundance of nutritious food, treating, *secundum artem*, the various organic lesions incident to drunkenness, meanwhile making every surrounding attractive and healthful, taking advantage of educational methods and Christian influences, and pursuing such a course, and adopting such methods, as will secure the self-respect of every patient, the confidence of every intelligent and honorable physician, and of all religious and philanthropic organizations. Every act at such an institute must be characterized by honesty and plain dealing, clarified by truth, "the wisdom, strength, beauty, power and majesty of all ages." Such an institution, so conducted, will give ample scope to intelligent philanthropy and bring hope, joy and salvation to thousands of hearts and homes and the blessing of God on rational methods.

THE only objection to a self-made man is that in many cases he has failed to put himself together so as to work noiselessly.—*Kansas Medical Journal.*

SUPPURATING CYST DEVELOPED FROM ADHERENT OVARIES, AFTER REPEATED ATTACKS OF INFLAMMATION. SECONDARY OPERATION FOR THE REMOVAL OF INTRA-LIGAMENTOUS CYSTS.

Read before the American Association of Obstetrics and Gynecologists at New York, September, 17, 18, and 19, 1891.

BY RUFUS B. HALL, M.D.,
OF CINCINNATI, OHIO.

In presenting this paper I have selected three cases from my work of the past few months, which illustrate some interesting points, and teach a very valuable lesson, which, in the judgment of the writer, cannot be too forcibly emphasized by men engaged in abdominal and pelvic surgery. I report the cases as illustrating three as difficult abdominal operations as it has ever been my misfortune to have seen. While it is not a pleasant task for an operator to report the cases which have not recovered, it is my practice to do so, for it almost always occurs that from the careful study of these unfortunate results much valuable information is gained, and I am quite certain that we shall not be disappointed in the present instance in that particular. Even though the task be an unpleasant one it is one which every operator should do as promptly and carefully as he reports his successful cases, yet I am in a position to say it is not always done.

Case 1.—Mrs. W., aged 33, Troy, Ohio. Mother of one child nine years old. One year after the birth of her child the patient had an attack of pelvic inflammation from which she never fully recovered, yet she was able to move about the house after a few weeks. For a period of four years just preceding the operation she was so ill that she required constant treatment. The last two years she suffered constant pain, and for four months before the operation she was confined to the bed. She, being the wife of a physician, received attentive care during all of this time. The treatment gave temporary relief only, and after each recurring attack the patient was conscious of the fact that she did not regain her health to the same degree which she had previously enjoyed. As she expressed it to me she was slowly but surely reduced to a chronic invalid. The question of an operation had been often discussed by the patient and her husband, and as often discarded. It was only after the discovery of the tumor that the patient or her husband would be convinced that an operation must be made if they hoped to effect a cure or avert a speedy death. When I was asked to see the patient in January, 1891, I found that she had a tumor about the size of a child's head at birth, and had been suffering for weeks from an attack of peritonitis and sepsis. She was in such a miserable condition then, from long suffering and the effects of morphine, having daily a high temperature that I advised a short delay, with the hope that we might put her in a better condition for an operation. The morphine was taken away and phenacetine substituted, and the patient urged to take as much liquid food as possible. She improved to some extent, and after six weeks was moved to my "Home" for the operation, which was made February 28, 1891, and the specimens here presented removed, with the greatest possible difficulty. You will observe shreds of adhesions attached to every portion of the cyst wall, also the exceedingly thin wall of a part of the cyst. The contents was pus, and much of it was spilled inside, before the cyst could be enucleated. The patient had a slow recovery, but was able to go home in five weeks and is now in good health.

Case 2.—Mrs. S., Mt. Auburn, Cincinnati, aged 39 years; mother of three children, the youngest nine years old. She was conscious of the fact that she had some pelvic trouble after the birth of her last child. When it was fifteen months old she first sought relief on account of pelvic pain. Soon after the physician began to make local applications, the patient had an attack of peritonitis, which confined her to the bed for several weeks. Three weeks of that time the whole abdomen was covered with flax seed meal poultices as hot as the patient could stand. They were changed every one and one-half hours, so they could be kept constantly hot. After the patient was so she could move about from that attack, she had local treatment for twelve or eighteen months regularly until she revolted. Then that was for a time suspended. For the following two years she was more or less under the care of her physician, always "conscious of a tender lump in the right side" of the pelvis. In April, 1887, the patient again had an attack of peritonitis which confined her to the room twelve weeks. Nine weeks of the time she could not leave her bed. The first three weeks of that time she was again poulticed as before. After that date she suffered constant pelvic pain, which could only be relieved—not cured, by her attentive physician. The enlargement "or tumor" was discovered some time before the operation. It was variously diagnosed by different physicians. Early in July, 1890, a well known physician of Cincinnati thought electricity would be just the thing for a growth of that kind, with such a history as this patient had, and so applied it; but unfortunately for the patient, it did just what every man engaged in this work knows it will do—it set an attack of peritonitis which nearly cost the patient her life. Another well known physician saw the case with the attending physician with reference to an operation some weeks before the operation was made, which was after the patient had been treated by electricity, and many months after the tumor had been discovered; yet he could see no reason why an operation should be advised or made, and so expressed himself, notwithstanding the facts that the patient was a confirmed and suffering invalid, confined to the bed for weeks at a time with peritonitis from the most trivial causes, and a well defined tumor in the pelvis and abdomen. The patient came under my observation in April, 1891, after she had been suffering for weeks with peritonitis and sepsis. The pelvis was filled by a tumor which extended into the right side of the abdomen. The tumor was somewhat larger than a cocoanut. The operation was made April 27, 1891. There were dense adhesions to intestines, omentum and pelvic floor. Every portion of the cyst was adherent, except a space of two square inches upon the upper surface. One who has not had experience in removing ovarian cysts, which have developed from an ovary bound down by adhesions where the patient has suffered for many years from repeated attacks of peritonitis, can not quite appreciate the difficulties to be overcome in such cases. You will observe by this specimen that every portion of the cyst wall, except the little space

in front, is covered by ragged shreds illustrating the adhesions. The tumor contained pus. The patient rallied better than any one could expect—but died the fourth day from the preëxisting sepsis, which had existed for weeks before the operation.

REMARKS.

Both of the preceding patients had been sufferers for years, both had suppurating cysts developed from adherent ovaries of long standing; both had chronic sepsis at the time of operation. The facts to be derived from them are worthy of careful consideration by every physician in the land. I have thus gone into details more than I otherwise would, had it not been that I wanted the expression of the Fellows of this Association upon non-interference in such cases. The first fact to be derived from these cases is, that when a woman is rendered an invalid from repeated attacks of pelvic inflammation, with adherent ovaries and tubes which are evidently the cause of the attacks, thus threatening life and rendering existence a burden, they should be advised to submit to an operation for the removal of the diseased organs. That advice should be given as early as it is evident that nothing but an operation can bring the hoped for relief; and not defer it until the last resort, as it was in these cases. Particularly is this true of the last case, who was known to have a tumor in the abdomen for many months. In my judgment, the physician who does not thus advise his patient is more than negligent of his duty. If the operation had been made years before, in both cases the patients would have been saved untold suffering; and who could say that both patients would not have recovered. I cannot understand why any one who is himself an operator could not see the necessity for an operation in the last named case, with the history of the case to guide him, and a well-defined tumor in the abdomen.

Case 3.—The third case, Mrs. D., aged 39, of Cincinnati, is one of more than ordinary interest, from the fact that the case was one of double intra-ligamentous cyst. Twenty months before the operation, the patient had been subjected to an abdominal section by a physician, who found an intra-ligamentous cyst on the right side, which he stitched to the abdominal wall after it had been tapped. After five months of pus and sepsis the external wound closed, but after a few months opened through the vagina, and discharged pus ever afterwards. The operation did not relieve the patient of pain, and after the operation she had a number of attacks of peritonitis, which confined her to her bed for months at a time. When she came under my observation, early in July, 1891, she was convalescing from an attack of peritonitis which commenced early in March, and was yet unable to leave the bed. There was a ventral hernia at the old scar, and a tumor about the size of a cocoanut in the pelvis and abdomen. She had constant pain, and frequent, almost daily, attacks of pain, lasting for hours, which could only be made tolerable by large doses of opium. The patient was a hopeless and suffering invalid unless she could be relieved by an operation. Her suffering surpassed anything I have ever witnessed, except in the last stages of malignant disease of the uterus. The patient and friends were anxious for any operation which promised relief, and thoroughly understood that the operation promised the last and only chance of relief. I was not anxious to operate after the abdomen had once been opened and a cyst stitched to the abdominal wall, which had been followed by months of suppuration and sepsis. I knew we would have the old cyst wall "pus sac," which was left after the first operation, to dissect from the broad ligament, as well as firm and extensive intestinal adhesions of twenty months' duration to deal with, and possibly a second intra-ligamentous cyst upon the opposite side, yet as a matter of duty I could not decline to operate and do that duty. If we encountered all of these conditions, the case would be a desperate one at best. After all of the facts had been plainly stated to the patient and friends, they decided to take the chance which an operation promised rather than suffer longer. The operation was made August 31, 1891, in the presence of Drs. Drake, Reed and Ricketts, with Drs. Johnston and Colter assisting. The abdomen was opened above the old scar. It was found that there was an extensive intestinal adhesion to the abdominal wall and the old cyst wall. The incision was now enlarged towards the pubis to the left of the median line, so as to avoid the intestines. After an hour's tedious dissection, for the adhesions were so firm that they could only be separated by the knife and scissors, the intestine was liberated so as to give working room. It was found that there was an intra-ligamentous cyst on the left side, the size of a cocoanut, which was completely dug, as it were, out of the broad ligament, after which the one that had been stitched to the abdominal wall was dissected out of its broad ligament. I here present both cysts. You can see that they were completely enucleated. There were extensive intestinal adhesions in the pelvis, but no attempt was made to liberate them. The hernial sac was cut away, a glass drainage tube placed, and the cavity closed. The patient rallied well from the shock, but died from intestinal obstruction on the fourth day. There was no leakage from the intestine into the abdominal cavity, as demonstrated from the drainage tube, which remained in until near the time of her death. In reviewing this case, I am certain that it would have been vastly better for the patient if the operation had been completed and the cyst removed at the first attempt. I believe that no operator is justified in leaving an abdominal operation incomplete except in malignant disease, for the reason that all other growths can be removed, and it should be done when once attempted. I am confident that the intestinal adhesions from the former operation had much to do in causing the fatal result. While I much regret the fatal termination, I feel that I did right in operating, and would again do so under similar circumstances.

So long as the general practitioner persists in pursuing what he pleases to call conservative treatment in these cases, and keep the patients under his care just as long as he can keep breath in them, and surgeons of the older class turn these patients from their consulting room as non-operative cases, and thus defer it, or the case is made still more complicated from incompleted operations, we shall continue to see just such desperate cases; and the men engaged in this special work must act as surgical missionaries, and have such neglected cases as the foregoing come to them for operation. While this state of affairs exists, what can we hope for other than a high mortality in these delayed cases—and who should be held responsible for the deaths?

A PROPOSED AMERICAN MEDICAL BENEVOLENT FUND.

BY FREDERICK HORNER, M.D.,
OF MARSHALL, VA.

Brief reference may be made to associations already in existence in the United States and in Great Britain, whose aim is to afford immediate pecuniary relief to disfressed, qualified members of the medical profession, their widows and orphans, and to grant annuities to such after they have attained 60 years of age.

First, "British Medical Benevolent Fund," President, Sir James Paget, Bart., F.R.S., was established in 1836. According to the late report furnished the writer by the courtesy of W. H. Broadbent, M.D., who is connected officially with the British Medical Benevolent Fund, a feature of this Fund is that the whole of the money subscribed is available for the objects of the charity. "£3,531 in 1891 was distributed in grants or annuities in the relief of cases of distress, many of them of utter destitution, and the relief given is not unfrequently all that stands between the recipient and the humiliation of accepting parochial relief," the end sought being to enable the recipient to make a fresh start in life, or assist in completing education of children who will later on contribute to the support of their parents. Dr. Broadbent, F.R.C.P., the Treasurer, states that subscriptions and donations, 1891, were £1,763, and the number of annuitants 99. Bankers, Bank of England, Western Branch. Solicitors, Messrs. Gedge, 1 Old Palace Yard; and Collector, I. G. MacAlister, Esq., 20 Hanover Square, London. In a late report of the committee of this Fund, it is stated, "Applications have come from medical men, widows lately bereaved, and cast upon the world after a life of comparative ease and competence, penniless and without resource. These, by timely aid, have been enabled to tide over the first few anxious months, and have thus had time given them to look around and find means for the support of themselves and families. Children of medical men have been given a helping hand, and fitted to maintain themselves. The sick and aged medical men, and those, too, who have found themselves in difficulty and distress, have had relief from this Fund. There is no expenditure in salaries; a small sum is paid to the Collector for postage and stationery. Annuitants receive £20 or £26 during the year, the total number, 4,327, at a cost of £43,499. The patrons of this Fund are very numerous: Her Majesty Queen Victoria; the British Medical Association through its various Branches; the Worshipful Company of Drapers; the Worshipful Society of Apothecaries; the Faculty of Physicians and Surgeons of Glasgow; the Worshipful Company of Salters; 'an old Patient;' I. H. Galton, M.D.; Sir James Paget and others; Alfred Rothschild, Esq.; 'thank-offering' by Sir J. Paget, 1872, with scores of other names, might be also enumerated as noble contributors to the Fund which annually has mitigated the rigors of old age and poverty, and made widows and orphans to rejoice. The donations have not been less than £10. One bequest was £12,300, and another, Miss A. E. Ling, £1,000. Six medical men receive annuities of £26, or 10s. a week. Grants ranging from £5 to £20 have been voted to applicants." The reader of the above extract from the report of this single Medical Benevolent Fund, will perceive that our English medical brethren furnish to us in America a noble example.

The first organization of the kind in America was undertaken by the Boston Medical Book Club in 1856 "for the relief of destitute physicians or their families." Afterwards, in 1857, certain physicians in Boston formed an association for the above purpose under the name of the *Massachusetts Medical Benevolent Association*. On May 8, 1871, the Massachusetts Medical Benevolent Society was formed and incorporated. G. C. Shattuck, M.D., Drs. Lyman, Francis Minot, Buckminster, Brown and other physicians, are mentioned as prominent members, the purpose being to afford pecuniary assistance to members of the medical profession, their widows and children. At first the property owned by the Society was $10,000. Six beneficiaries received an annuity of $50 in 1872. In 1875 there were enrolled 179 members. In 1887 there were 196. In 1891, 186 members. Legacies received amounted to $11,045.59. Its benefactor's fund $4,350. The president for 1890–91 is H. W. Williams, M.D., and treasurer, Francis Minot, M.D. The report of this admirable Society concludes with the statement that the money distributed to beneficiaries since its organization, amounts to $9,340.

Shortly after the late civil war, during which, it may be added, the work of the U. S. Christian and Sanitary Commissions contributed greatly to lessen the horrors of warfare, and to provide for suffering humanity, prominent physicians and surgeons, among whom may be mentioned the names of N. S. Davis, M.D., and that of the late S. W. Gross, M.D., highly commended the plan for the formation of an American Mutual Medical Aid Association. Subsequently to the civil war in this country the first organization was the Mutual Benefit Association of Kentucky, the president, Dr. Keller, of Louisville, Kentucky; the admission fee of $10, and the payment of an annual fee of $2, secures to the family of a deceased member of this Society $2,500, or to one sick $5 per week for serious illness or accident. The membership is upward of 2,000.

In 1875 was organized the New York Physicians Mutual Aid Association with a membership of over 350, and a permanent fund of $6,254, which has increased by donations from the wealthy and generous citizens of New York. Dr. Mark Blumenthal, a late president, says in his report "this Association has distributed, since its organization, more than twenty thousand dollars, and the amount of comfort conferred, and grief and sorrow assuaged by this sum, no figures or words can adequately express." His successor, Dr. Gouveneur M. Smith, in his late report of the work of the Association states: "It has now a financial capital of $172,000; its largest contributors and most earnest supporters are bachelors of the medical profession." He especially emphasizes that "a *charitable* element should always prevail in the direction of such fraternities, and that the affluent members of the profession should decree it a duty to their holy calling to foster any such organization."

In 1878 was formed the Mutual Aid Association of the Philadelphia County Medical Society, "which has, by the steady growth of their fund from gifts and legacies, as well as from annual dues, contributed to save the families of many of their deceased members from penury and distress." The late Henry H. Smith, M.D., Benjamin Lee, M.D., and other prom-

inent physicians from Philadelphia were founders of this Association, which Dr. Benjamin Lee, a late president, says, "Seeks to remove the reproach from the profession, that they alone of all callings and crafts made no systematic provision for the relief of brethren in distress, or of their destitute widows and orphans, unprovided for and left dependent on the cold charities of the world." This Society affords, also, aid to such members as from long continued illness, or accident, may be compelled to seek such aid. The permanent fund of $3,525 is invested and deposited with Guarantee Trust and Safe Deposit Company, of Philadelphia, either in Bonds of the United States of the State of Pennsylvania. In May, 1891, the permanent fund of this Association in Pennsylvania 5's and City 6's, and deposited in the Association's safe of the above Trust Company, 316 Chestnut street, Philadelphia, amounted to $6,168.75.

The Mutual Aid Association, of the State Medical Society of Virginia, requires each member of the Association to pay to the treasurer an initiation fee of $1.00, and to be assessed $1.00, $1.30 or $1.50 according to age, on the occasion of the death of a member; the funds to be disbursed by the treasurer and paid over without delay to the family of the deceased physician. The report made by a committee of this Association, recommended for the selection for officers, the best and most benevolent men, whose duties shall be to make an annual report of the proceedings, the amounts of money collected and expended and to raise funds to be applied for the relief of the destitute families of deceased brethren, who in some instances are no exceptions to the accidents, the financial distress and even of misfortunes growing out of the immoralities of human life, leaving not infrequently at death their families without support or resources of education.

These Societies hold annual meetings, either during the Spring or Autumn months. They require the applicant for aid to give name, date of graduation, college, means of support and cause of pecuniary distress and a certificate signed by two physicians. Among prominent physicians in the United States and in Europe, who have given their support and money towards the creation and endowment of a Medical Benevolent Fund may be mentioned, the President-Elect of the American Medical Association, Henry O. Marcy, M. D., who has declared "the object an excellent one." His predecessors, the late Professor S. W. Gross, Austin Hunt, Sr., M. D., and John Hodgkin, M. D., also Professors N. S. Davis, Sr., M. D., and Lewis Sayre, M. D., and Dr. P. O. Hooper, Little Rock, Ark., and Dr. William T. Briggs all have unanimously and officially endorsed the measure and have affirmed that "such a plan and object to aid disabled physicians and their families deserves the favorable consideration and support of every member of the medical profession."

Abroad, Sir James Paget and other eminent men have given their influence to promote such benevolent ends: Ireland has a Medical Benevolent Fund; the Lancet Relief fund is a private benefaction by the proprietors of the Lancet. The British Medical Association with its 16,000 membership, with branches in almost every county in England has its Mutual Insurance against sickness, reports of which appear annually in the British Medical Journal. The Royal Medical Benevolent College has its Medical Sickness Annuity and Hope Assurance Society, and kindred societies existon the Continent in Paris, Berlin and in other centres of Europe.

LECTURES ON GENERAL ETIOLOGY.

Delivered at the Chicago Medical College.

BY H. GRADLE, M.D.

LECTURE IV.

One of the conditions determining the occurrence of certain infections is the act of "taking cold." The dread of this event has such a hold on public belief, that it is difficult to sift the truth out of the immense array of alleged instances in which patients attribute diseases to "cold." Chilling of the body is such a common occurrence, and is followed by disease in but so small a proportion of cases, that we can infer a causal relation to the subsequent malady only when we can obtain, with some regularity and precision, the history of cooling of the surface preceding a given form of disease in numerous instances, and within a definite period of time. This is the case in acute nasal catarrh. On the basis of its pathology and clinical history, we must regard acute suppurative rhinitis as an infection, although the virus has not yet been identified. Now, how can "taking cold" bring about this infection?

In all clinical instances of suppuration, the pus contains the parasites. As nasal catarrh is a very common trouble, and is attended by copious secretion of pus, we have all reason to suspect the wide dissemination of the microbe causing it. There is hence frequent opportunity for these germs to reach the nasal cavity. But it is more than doubtful whether the deposition of these germs on the mucous membrane is sufficient for its invasion. For in that case there would be more evidence of contagiousness, which could scarcely be overlooked in a disease of such frequency, such short time of incubation and such marked onset as acute catarrh. We must infer that the occurrence of infection is determined by certain conditions, as to the nature of which the following is about the extent of our present knowledge:

There exists, in and underneath the nasal mucous membrane, a dense plexus of veins, the capacity and turgescence of which vary within rather wide limits in the normal state. This vascular network is more or less diffused, but is massed into distinct cavernous cushions at the anterior and posterior ends of the inferior turbinated bone. The normal individual is not conscious of the variable congestion of this plexus. But if one side of the nose is narrowed by thickening or deflection of the septum, or if the cavernous body has become hypertrophied in consequence of frequent attacks of catarrh, the individual can feel a sudden turgescence of the nasal lining whenever a part of the body is chilled. The cooling off of a cutaneous area, for instance, by a draught on the shoulders, causes, through reflex influences, relaxation of the nasal blood-vessels. Most of the time this is a transitory occurrence, without other consequences. In some instances, however, it is followed by acute nasal catarrh within twelve to eighteen hours. In what manner this reflex congestion of the nasal blood-vessels favors the invasion of the mucous membrane by parasites accidentally on its surface, we do not know; but that it does, is a matter of clinical observation.

Another precise instance of the influence of "cold"

is acute inflammation of the middle ear as the result of diving. Cold water in the meatus gives most persons a disagreeable feeling of fulness, which may disappear in some hours, or may increase until inflammatory symptoms set in. It is evidently due to vascular disturbances extending down into the Eustachian tube. As the naso-pharynx and, according to De Rossi, even the Eustachian tubes, may harbor germs on their surfaces, particularly so in the so frequent chronic inflammation of the naso-pharynx, the congestion resulting from the chilling of the meatus evidently favors the infection by the disease germs present.

It is doubtful whether there are any other well authenticated instances of acute infections of mucous membranes resulting from chilling of the surface. But it can be often observed clinically that the continuous cooling of the feet or some other limited area of the skin, or the sudden chilling of the warm surface, lights up again a preëxisting inflammation of mucous membrane which had begun to subside. This transformation of a mild subacute or chronic condition into an acute attack can be witnessed in catarrh of the nose, ears, bronchial tubes, and especially the intestines. Probably this occurrence more than any other forms the basis of the popular belief in "colds."

Exposure to cold is an etiological factor also in rheumatic affections. In the variety known as "muscular rheumatism," chilling of the surface is most commonly stated as the event leading to the trouble. We neither know at present whether muscular rheumatism depends on infection, nor in what way "cold" may bring about the inflammatory exudation. In articular rheumatism, which we cannot logically consider anything but an infection, observation teaches that exposure to cold does play an important determining rôle, but how, is at present guesswork.

Whether the hygienic surroundings and habits of man influence his liability to acute infections, is an open question. But that the ability to check the extension of chronic infections varies with the state of physiological vigor, is a much more certain observation—particularly so in tuberculosis, perhaps also in syphilis. Very instructive in this respect is an experiment of Trudeau,[1] in which five rabbits were inoculated with tubercle bacilli and then set at liberty upon an island, thus giving them the fresh air and exercise which the ordinary victims in the laboratory lack. While tubercular infection is nearly infallibly successful in rabbits in captivity, of these five wild animals, four escaped without lesions of any kind. A clinical observation of similarly striking nature refers to the liability of infants to summer diarrhœa under bad hygienic circumstances, as contrasted with their relative immunity when leading an outdoor life.

The state of nutrition is popularly supposed to determine the susceptibility to various infections. Clinical evidence, however, confirms this view only to a limited extent. Typhus and relapsing fever are known to spread especially during periods of famine and amongst underfed people. Canalis and Morpurgo[2] have investigated experimentally the influence of starvation on the relative immunity which pigeons, chickens and rats present to anthrax infection. In the case of birds they found that the susceptibility to the disease was increased by the deprivation of food, so that they could be infected with certainty, while of the normal animals only a small proportion succumb. In rats, however, the results were negative. Proper nutrition is also recognized as an important factor in the resistance of the body against tubercular infection. While it is questionable whether the first local effect of tubercular inoculation is at all influenced by the state of nutrition, it is certain that in the underfed body the infection is more apt to spread than in a well nourished system. Another disease, in all probability of infectious origin, but determined by the diet, is scurvy. Here the absence of fresh vegetables is the condition upon which the occurrence of the infection depends.

Improper diet, poorly prepared food and especially insufficient mastication of the food, are largely responsible for the disturbances in dyspepsia, and catarrh of the stomach and intestines. While we yet lack positive demonstration, there can scarcely be any doubt but that these diseases are due to bacterial influences, if not invasion of the mucous membrane, at least abnormal fermentations. That these conditions are maintained by errors in diet, or faults in eating, which fill the intestinal tract with material difficult of digestion, and hence, irritating, is clearly demonstrated by clinical and therapeutic experience.

Certain infections are favored by preëxisting anomalies of nutrition. A striking instance of this is the predisposition of diabetic patients to tuberculosis and suppurative processes, such as phlegmons and furuncles. An experimental explanation of this predisposition was found by Bujwid[3] in the fact that the injection of glucose with staphylococcus cultures diminishes the resisting power of the tissues to these parasites. The resistance of the organism against some infections, particularly pneumonia, is also lessened by the abuse of alcohol and the nutritive disturbances incident to other degenerations of the nervous system, like general paresis.

The possibility of infection is increased in some instances by the simultaneous influences of different microbes. Experimental proof of this occurrence was obtained by Roger. Rabbits are naturally immune against malignant œdema (at least some races of rabbits). But, if this bacillus is inoculated together with the bacillus prodigiosus—the latter by itself a non-pathogenic microbe—the animal succumbs to the infection. The same animal cannot contract symptomatic charbon by inoculation with the pure culture, but gets that disease when infected with a mixture of the bacillus of symptomatic charbon with the bacillus prodigiosus, the proteus bacillus or the yellow staphylococcus. Virulent secretions, though they contain originally a pure culture of some parasite, can easily catch other germs from the air or by contact, and by the time they dry on the surface of objects or become suspended in the air as dust, they yield thus material for mixed infections. Bacteriological analysis shows that pus from abscesses, or from pleurisy or suppurative otitis, contains very often more than one variety of parasites. Mixed infections are therefore an actual, and not very rare, occurrence. While the course of suppuration of mixed origin is not different from those due to a single variety of microbes, it is probable that the accidental entrance into the system of associated parasites may lead to disease, where one foe, unaided by others, might have been resisted.

1 American Journal of the Medical Sciences, July, 1887.
2 Fortschritte der Medizin, 1890, No. 18 and 19.
3 Centralblatt f. Bakteriologie, Bd, IV, s. 577, confirmed by Karlinski idem.

Of even greater clinical importance than the simultaneous association is the succession of different parasites in the instances known also as mixed infections, but perhaps more properly termed secondary infections. This is exemplified by diphtheria. The disease by itself is due to the characteristic bacillus always found in the deeper layers of the pseudo-membrane of true diphtheria. In the majority of patients, however, a streptococcus, apparently the well-known streptococcus pyogenes, invades the diseased membrane after a few days, and may persist there even after the diphtheria-bacillus has been eliminated, or it may spread along the lymphatics and reach internal organs. Diphtheria as seen clinically is thus often a succession of two different infections, each with danger peculiar to it. Similarly, autopsies often show in typhoid fever streptococci or staphylococci in the intestinal lesions or even in foci in other organs. Septicæmic complication dependent on the familiar pus cocci occurs likewise in variola and scarlet fever. The frequent occurrence of such secondary infections and bacterial associations has been particularly described by Babes.[4]

The possibility of secondary infections depends on several factors. In the first place the invasion of mucous membranes by the primary parasites does away with the protection which intact surfaces give the body against certain infections. Thus in case of the pharynx, the staphylococci and streptococci often present in the mouth can enter the diphtheritic patch, while the same cocci or the bacillus coli commune can likewise invade intestinal lesions caused by other influences. In pulmonary consumption, too, we find the bacillus tuberculosis aided in breaking down the tissue by various bacteria which have found an open entrance through the diseased pulmonary surface.

In the second place, however, it seems that the organism damaged by the poisons of one variety of parasites cannot struggle successfully with another invader which it could resist in its normal state. The first case of mixed infection ever recorded was of this nature. The bacillus of malignant œdema is so widely distributed, that the rarity of the disease in man evidently means that the human race is practically immune against it. Nevertheless, Brieger and Ehrlich saw this infection complicating typhoid fever in consequence of hypodermic injection of a tincture of musk contaminated with this microbe.

As secondary infections we must also class the occurrences which clinicists have hitherto called complications, such as pneumonia during or after typhoid fever or measles, endocarditis during rheumatism and similar instances.

Another important aspect of infectious diseases is the spreading of infection from one locality to another. While the propagated nature of disease of this kind cannot escape attention, whenever the primary infection is observed as it creeps along, there are cases in which the primary disease occasions but little annoyance, or where the extended disease follows the original trouble only after some length of time, and in these cases the source of the infection may be overlooked. Instances of such *infection by extension* are the involvment of the maxillary sinus in consequence of nasal (or dental) disease, the extension of catarrh from the nose to the ear, the propagation of infection from the ethmoid cells to the contents of the cranial cavity. Again, phlebitis of the transverse sinus and meningitis from suppuration of the middle ear furnish examples of this occurrence as well as the extension of inflammation from the urethra into the seminal ducts and epidydimis. Very important also is the extension of gonorrhœa into the Fallopian tubes. In these different instances the virus causing the later disease is not necessarily identical with the microbes of the original focus. For in the case of mucous surfaces there is all opportunity for bacterial associations, and parasites which may have only secondarily settled in the locality first diseased, may gain the ascendency in the tissues subsequently involved. The dissemination of the primary virus or of some secondary parasites superceding it can depend on anatomical peculiarities, favoring the extension or interference with the resisting power of the adjoining tissues due to venous stasis or collateral œdema. Probably slight traumatism, vascular disturbances, the result of chilling and mechanical influences carrying along the virus, may also play a rôle.

An instance of infection by extension of peculiar nature is the spreading of sympathetic inflammation from one eye to its fellow. Here the path of the virus is along the sheaths of the optic nerve to the chiasm and down along the other nerve to the second eye. In view of failure on the part of some observers in finding microbes along this tract in some instances, the query suggests itself whether sympathetic ophthalmia is not occasionally due to the transport of toxalbumins, and not of living parasites.

Infection by extension does not always follow continuity of surface. A frequent observation is the occurrence of nasal or pharyngeal inflammation followed in the course of some days by bronchitis, while the larynx remains healthy. Some patients give this history in many successive attacks. What path the virus pursues here is not certain.

A special variety of infection by extension is the transportation of virus from one part of the body to another through the blood vessels. This is best exemplified in pyæmia. In this disease pus-generating microbes developing in some part of the body, perhaps only in an insignificant spot, are carried away by the blood current and are ultimately deposited in internal organs forming foci of inflammation, which develop in time into metastatic abscesses. Pyæmia is not an etiological unity any more than suppurative inflammation, and can probably be caused by any microbes of sufficient pyogenic properties. It is not understood as yet what factors contribute to drive the parasites into the blood. From the distinctly epidemic character of pyæmia as seen in hospitals before the days of antisepsis, it is to be inferred that one of its conditions is a high degree of virulence of the parasites. Metastatic infections are seen, however, in other diseases as well as in pyæmia. Thus inflammation of the testicles in the cour e of mumps is an instance. Similarly we find occasionally a pneumonia complicated by meningitis due to the distribution of the pneumococcus through the circulation.

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d. Besides the primary affections due to physical, chemical or parasitic causes, we may group together various diseases which, according to our classification, may be considered as primary diseases, inasmuch as they do not depend on other preëxisting troubles.

[4] Bacteriologische Untersuchungen ueber septische Processe des Kindesalters, 1889, and Cornil and Babes Transactions of the tenth Intern. Med. Congress. Pathology, p. 12.

Their cause, however, is not directly any occurrence in the outer world *but the impression made on the nervous system* by different events. If we wish to classify these diseases at all etiologically, we can call them the result of influences which derange the mechanism of the nervous system by inducing excessive action in some part of it. As a type of this group, may be mentioned surgical shock. The mechanical violence leading to it is the cause of the shock only, inasmuch as it makes a specific impression upon the nervous system. Another example of this etiological group is rail-way spine, or the traumatic neurosis resulting from some physical accident associated with a deep emotional impression. Mental influences, such as terror, have been known to cause chorea, while excessive worry must be considered a sufficient cause of certain transient forms of insanity.

In this provisional etiological group, we may also include nervous disturbances, resulting from overwork, such as writer's palsy and the various forms of professional cramps. In all these instances the nervous system can be thrown out of gear all the easier if there exists a "neuropathic tendency," a condition which will be further described under reflex-neuroses.

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II. Secondary Diseases.—A large number of ailments are not at all the result of causes originating outside of the body, but are the consequence of some pre-existing disease, lesion or anomaly in the system. The etiology of these secondary diseases must therefore be studied from a point of view different from that in primary diseases; it must be based on physiological and pathological investigations, irrespective of the outer world. But we must not overlook that the distinction between primary and secondary diseases is an etiological one only. The same lesion may, indeed, be produced in more ways than one. Thus a neuritis is a primary disease, if due to some poison taken into the body, but is a secondary affection if caused by toxic substances formed as the result of disease, in another part of the system. The pathological changes may be the same in the two cases but the prognosis is different according to the cause.

In the study of secondary diseases we must avoid unnecessary digressions, by distinguishing clearly between secondary diseases and mere symptoms. All the morbid phenomena which depend directly upon, and are the immediate consequences of any existing disease or anomaly are symptoms. Any train of morbid disturbances, however, which is but indirectly induced by some other ailment, can be considered a secondary disease. True symptoms must be present in every case of a given disease at a given stage, but secondary affections occur only when the primary disturbance which leads to them, happens to be associated with the proper anatomical or pathological conditions. Symptoms disappear as soon as the disease is over, but secondary maladies may continue after the ailment which started them has been removed. This distinction may be illustrated by the results of the pressure of a tumor upon a nerve. The pain and the transient inpairment of function thus produced are symptoms of a tumor in that locality, but the atroppy of the nerve which may set in is a secondary disease. Again, thrombi on the cardiac valves cause symptoms in the form of certain circulatory disturbances, but the detachment of such a clot and its arrest in an artery of the brain is a secondary affection. There are instances, however, in which a sharp line cannot be established between symptoms and secondary diseases.

In attempting a review of secondary diseases from an etiological standpoint, the mere enumeration of the various lesions, which may give rise to them, would be of little service. But we can get a convenient classification of the subject *based on the manner in which the secondary diseases are induced.* We can thus recognize secondary affection produced

(*a.*) In a mechanical way.
(*b.*) Through influence on the nervous system.
(*c.*) In a chemical manner, and
(*d.*) As the result of nutritive disturbances.

AN INCARCERATED HERNIA RELIEVED ON THE FIFTH DAY BY LOCAL APPLICATIONS OF ETHER. POSITION, AND MANIPULATION.

BY C. M. FENN, M. D.,
OF SAN DIEGO, CALIFORNIA.

Some time ago a middle-aged sporting man, with the following history, came to the County Hospital, three miles from the city, and then under my service.

Five days previously he clandestinely occupied a bed in one of our hotels, hoping to speedily reduce a chronic inguinal hernia. Failing in this a physician was summoned who, meeting with no better success, gave him an anodyne and left him for the night. On the following day a consultation was held which was interrupted by the landlady ordering the trio out of the house! During the next forty-eight hours, at his new quarters, four doctors were in frequent attendance, and finally decided that operative interference was imperative.

At our interview, on the fifth morning, I learned that stercoraceous vomiting and anenexia had been present, with other symptoms, yet he had survived the jaunt of three miles, and after a good night's rest, was in a fine condition.

As I was en route to visit a pressing case, frequent applications of ether were ordered, meanwhile, as at least a good preparatory treatment. He was also placed in a position for taxis which I believe to be in a measure my own, as well as a most helpful one in such cases. The hips were elevated upon the back of an inverted chair, to an angle of about forty-five degrees with the abdomen. Feet with toes turned in hung over the highest or last round of the chair. In this position, differing somewhat from the descriptions of authors, gravity becomes a vis á fronte which efficiently supplements the vis á tergo, or manipulation of the surgeon, and is a ready metho for relaxing the muscles and fasciæ involved.

Upon my return, a stimulating enema was ordered which dispersed the intestinal flatus. After this and a brief attempt at taxis, I was pleased to see the intestine return to its proper receptacle. Convalescence was rapid and complete.

San Diego, California.

LAPARI affirms that cold has a great influence in inducing pneumonia, because it disables the bronchial epithelium to such an extent as to readily admit the easy entrance of infectious material to the alveoli.—*American Lancet.*

SOCIETY PROCEEDINGS.

The Medical Society of the Missouri Valley.

Tri-Session of the Fourth Year held at Leavenworth, Kansas, March 17-18, 1892.

SECOND DAY—MORNING SESSION.

(*Concluded from page 461.*)

S. G. Gant, M. D., Kansas City, Mo., Rectal Surgeon to All Saints Hospital and Childrens Home, read a paper entitled:

PRURITUS ANI WITH REPORT OF CASES.

Mr. President and Gentlemen:—I have selected this subject from the fact that it is one of the most frequent rectal disorders that the physician, as well as the specialist, is called upon to treat; and, at the same time one of the most troublesome to cure. I would rather see a patient come into my office complaining of any other rectal disorder barring cancer than pruritus ani. If the patient had hæmorrhoids, fistulæ, ulcer or fissure, I could tell them with a degree of confidence that I could cure them within a reasonable length of time, but with this very intractable affection I have to shake my head and say that unless they will strictly, patiently and persistently follow my advice as long as I think necessary, I cannot cure them, but if they will do this I feel confident that they will eventually make a good recovery. Patients realizing that rectal diseases are unattractive and repugnant habitually manifest more than usual hesitation in applying for medical aid, as a result of this false delicacy the physician rarely sees a case of pruritus until the patient has in many instances suffered for years. The itching is almost unbearable in many cases, but it is worse at night after they get warm in bed. It is so annoying and the temporary relief obtained from scratching so great, that I have heard a patient remark that he would scratch if he knew he would be sent to the penitentiary the next moment. Pruritus ani is generally a symptom of some other disease, as hæmorrhoids, eczema, ulcer, fissure, pinworms, etcetera, but it is often present in a marked degree when no other cause for its existence can be discovered; in all probability a neurosis of the skin. It is a very annoying affection, dependent on no particular general state, being found in all classes of people from the millionaire to the pauper.

The itching is more or less constant and scratching is often indulged in unconsciously, during sleep, which aggravates the condition by lacerating the skin. In old cases there are many points of interest to be noted such as a change in the color of the skin, it being thickened and usually of a dullish white color, and sometimes having a parchment like appearance, or else eczematous and moist from exudations. At times instead of the moist condition, the skin around the anus will be found scaly. But the most characteristic change to be noticed is that the fissures are cracked, and are seen radiating from the folds of the anus to a greater or less degree. I have seen these cracks extend down the leg half way to the knees and up the under surface of the scrotum of the penis as far as the glands, and in one case the skin was very thick and felt like leather. In this connection I would like to say a few words about the ignorance often displayed by the laity and frequently by apparently successful practitioners of medicine, as regards rectal disorders, for many seem to think that there are only two diseased conditions habitable to the rectum, namely, *piles* and *fistulæ*. The very extensive case of pruritus just spoken of was referred to me to be treated for itching piles, and not long since I had a marked case of cancerous stricture of the rectum referred to me by a prominent physician; on the back of his card was this very expressive sentence, "I think the patient has the piles." Why this deplorable ignorance on the part of physicians who seem to be well posted in other departments of medicine? I will not say ignorance, for I candidly do not believe it is the result of that, but of gross carelessness on their part in not making a thorough examination. The patient goes to the physician with the remark, "Doctor, I have the piles"; perhaps he will gently drop down the pantlets, give a casual glance at the anus and perhaps observe a cutaneous tag or swelling and say "yes, you've got 'em again". The patient will say, "doctor, I have a fistula"; the doctor gives the same careless examination and perhaps observes a slight discharge coming from the rectum, and confirms the diagnosis of the patient without in either case introducing a speculum to see if the external conditions were not a result of a more serious internal disease as stricture, ulceration, or polypi. Gentlemen, the time has come when this sort of thing ought to stop, and we as progressive men and in a progressive age should look into the cases in a more careful and scientific manner, and not let our want of knowledge and carelessness drive these cases to the so-called advertising specialists —namely, *itinerant quacks* for treatment, many of whom never saw the inside of a legalized medical institution. But prepare ourselves so that we as regular and legalized practitioners of medicine, may gather in the shekels.

A word now in behalf of rectal specialists in the regular profession. If you should have occasion to send patients to them for treatment do not inform them before they go that they will certainly get cured, and that just so much time will be required, and that they need not be delayed from their daily vocation; for in my experience as a specialist in this department of medicine, I have found many patients and some physicians who seem to think that a specialist knows no such thing as failure, and that he ought to be able to tell them on the spot, just how many days, hours and minutes it will take after the operation before they will be entirely well.

Now, to continue the subject of the paper, I will say that it is not well to promise to cure a patient of pruritus in any given length of time, but if they choose to place themselves under your care for treatment, do the very best you can for them. In considering the treatment of pruritus, the first point to be gained is to ascertain the cause, remove it, and thereby cure the itching. It may be the result of a fistula with internal openings, thread worms, which when present can be seen in the radiated folds of the anus; it is sometimes accounted for by the presence of pediculi; again, pruritus of an intense kind may be due to eczema marginatum, the diagnosis of which depends on finding the spores of the plant, and it has been found as a symptom of chronic eczema herpes and of erythema; it is, however, more commonly a result of hæmorrhoids, polypi and ulceration. If, however, no local cause can be discovered, a constitutional one should be sought for and corrected. It is well to look after any errors in diet; anything like excess in tobacco or alcohol will aggravate the disease, and must be regulated if indulged in at all; interdict beer and spirits, and restrict the drinking to a small amount of light sherry or claret, and Vichy or seltzer water. I have seen many a case relapse after a prolonged spree. I remember one case in a gentleman who was in the habit of getting on periodical sprees (who unfortunately did not have the benefit of the Keeley treatment), whose pruritus returned with each spree. Coffee should be given up, and weak tea or cocoa substituted for breakfast. The various condiments used for flavoring food should also be discontinued. It is beneficial to enjoin a walk daily in the sunshine after a cold sponge bath in the morning, followed once a week by a hot or Turkish bath. Another thing which affords patients much relief is to bathe the anus and surrounding parts, just before retiring, with warm water and tar or Castile soap. The bowels should always be kept

in a relaxed condition, for which there are many remedies to choose from, endeavoring to select one to suit the case under advisement. The following prescription comes from Allingham, and which he recommends very highly:

Magnesia sulph., ʒj.
Magnesia carb., grs. v.
Vini colchici, mv.
Syrup sennæ, ʒj.
Tr. cardam. comp., ʒss.
Ext. inf. chiratæ, ʒj.
M. Sig. Twice daily.

The mineral waters will be found useful in many cases for the same purpose.

In speaking of the medicinal treatment of pruritus, I will say that there are a great many prescriptions highly recommended for its local treatment, but I must confess that I know of no specific; but much relief from the itching can be obtained from the use of the different remedies. A good lotion to apply after bathing the anus at night, and one which affords much relief, is composed of:

Soda biboratis, ʒij.
Morphine hydrochlor., grs. xvii.
Acidi hydrocyanici dil., ʒss.
Glycerinæ, ʒj.
Aqua ad q. s., ʒviij.
M. Sig. Use as lotion.

I have found the following glycerole to be both cooling and palliative. It is composed of:

Pulv. alum, ʒij.
Hydrarg. chlo. mite, ʒj.
Glycerine, ʒiij.
M. Sig. Paint the affected parts with it every night.

The yellow wash and chloroform ointment I have found serviceable. One of the best formulas for the relief of the itching that I have ever used comes from Dr. Bulkley, of New York, and is composed of:

Unguent picis, ʒiij.
Unguent bellad., ʒij.
Tr. aconite rad., ʒss.
Zinci oxidi, ʒj.
Unguent aqua ros., ʒiij.
M. Sig. Apply night and morning.

Where the itching seems to be of a nervous character arsenic is indicated. It may be combined with quinine and cod liver oil if indicated and carried to its full physiological effects. If pin-worms be the cause, an injection of lime water, infusion of quassia or one composed of carbolic acid ʒj, glycerine ʒj and ʒvij will usually destroy them, the infections being used after each passage.

I will not take up your further time by giving you numerous formulæ, but will say that those composed of carbolic acid, the metallic salts, menthol, quinine, and the various other astringents will be found valuable in the treatment of pruritus with the proper bases, making the prescription a little stronger or weaker as the case progresses. By their aid much relief can be given the patient. If, however, the itching is so annoying that the patient cannot sleep (which is often the case) do not prescribe morphine or an opiate, for they are always followed by an increase in the disorder, after their immediate effects have passed off. The bromides and chloral I have found preferable; in a few cases I have had patients obtain a fair night's rest after the use of the coal tar derivatives which are flooding the market just at present. If I have an unusally bad case where the above remedies fail to bring comfort and sleep, I resort to a very ingenious device which I have found to bring about the desired result. This little device is known as Allingham's bone plug which is shaped like the nipple of an infant's feeding bottle, the nipple should be an inch and a half in length with a circular shield to prevent it slipping into the bowel. It is supposed to prevent the itching by exercising pressure on the venus plexus and the terminal nerve filaments close to the anus. I have found it to give immediate relief in nearly every case, thus affording the patient a good night's sleep, and patients tell me that its retention causes them scarcely any annoyance. The surgical procedures resorted to in the treatment of pruritus are somewhat varied; the operation performed depends entirely upon the cause of the itching, and in order to bring before you the surgical procedures which I have resorted to and with fairly good success, I will report briefly the following cases.

Case 1.—Married lady, 30 years old, in good circumstances, family history good as well as her general health. She was referred to me by one of my associates to be treated for itching piles. After much trouble I succeeded in getting her to submit to an examination which revealed the following condition of things. There were many long scratch marks all around the anus and sides of vulva; the skin looked red and angry as a result of constant scratching, and was much thickened. By the aid of the speculum I discovered a very small fissure about one fourth of an inch in length on the posterior wall of the rectum about the junction of the internal with the external sphincter muscles, in the bottom of which I could see a small round lump of hard fecal matter which no doubt was the immediate cause which kept up the itching, that on the outside evidently being of a reflex nature.

Treatment.—Placed patient under chloroform, curetted the fissure with a fine curette and applied to the fissure a solution of silver nitrate, grains 20 to the ounce, painted the surface around the anus twice a week with iodine, and the fissure was painted over with balsam of Peru. This was kept up for three weeks at the end of which time the patient had entirely recovered and remained so for one year that I know of, at which time I lost sight of her.

Case 2.—Mr. O. C., Irishman, 50 years old, contractor, was addicted to all the ordinary habits of life. Said he came to be treated for itching piles. Said that he had been troubled with them for fifteen years, ever since a traveling doctor removed a tape worm from him. On examination I found him to have one of the worst cases of pruritus ani that I have ever seen, the skin was torn and lacerated half way down to the knees, it was very thick and of a dullish white color with many cracks half an inch in length running transversely to the long diameter of the leg. I found the same condition around the anus and scrotum, and even extending along the under surface of the penis as far as the glands, some of the cracks being very deep. As he expressed it, "he suffered the torments of the damned," there being constant itching, but which became almost unbearable at night. He had gone the rounds and been treated by many physicians, and he used all the patent nostrums ever recommended for piles, but he had never had an examination made. I informed him that I could do nothing for him unless he submitted himself to an examination that I might ascertain the cause of the trouble. To this he finally consented, and by the aid of speculum I discovered a very large ulcer about the size of a quarter on the posterior wall of the rectum at the upper portion of the internal sphincter muscle. I judged that it had been there for a great length of time, perhaps for years from its color and thickened edges, and in my mind the outside trouble was caused from the unhealthy discharge from the ulcer.

Treatment.—The treatment consisted in making an incision through the center of the ulcer and carrying it sufficiently deep to divide the fibres of the internal sphincter, in this way securing partial rest. The ulcer was then painted over three times a week with balsam of Peru after an injection of warm water; for the itching on the outside I had the patient smear the parts over night and morning with a chloroform ointment. This treatment was kept up for a month, at the end of which time the patient was entirely well.

Case 3.—Lady, 28 years old, of very nervous temperament, being one of those individuals who thinks she has some trouble for which she needs an operation. The patient came to me complaining of itching about the anus, and informed me that she needed an operation. On careful examination I found nothing, paralyzed sphincters for luck, and cured my patient in a week.

Case 4.—Patient, male 40 years old, lamp lighter by occupation. His family physician referred him to me to be treated for itching piles and remarked, at the same time, that he had tried various remedies commonly used in the treatment of that trouble. On examination I found that

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the patient had an obstinate case of pruritus, but further examination with a speculum could not detect any internal trouble. I thought possibly that the itching might be due perhaps to some kind of germ chasing around in the skin, so I placed the patient under chloroform and resorted to a rather radical way of treating pruritus. I took my Paquelin cautery and blistered the diseased portion in good shape, recommended him to stand up for a week, treated the cauterized parts as I would a burn of any kind, and at the end of ten days the parts had entirely healed, and that was the last of his pruritus. This was 18 months ago.

Case 5.—Male, æt 40, a man of very nervous temperament, said that he had been troubled with the "itching" for over three years, and had tried numerous remedies for its relief. On examination I noticed a whitish discharge coming from the anus; on making a digital examination, I discovered a large growth some four inches in length, the largest diameter being about an inch and a half. This growth was attached to the posterior wall of the rectum by a pedicle about the size of my little finger. I advised an operation for its removal, and having obtained his consent, I proceeded to ligate the pedicle with strong silk, after which I removed the growth which proved to be a very large polypus; the pedicle being very vascular and there being some oozing, I deemed it advisable to cauterize the stump, after which there was no more hæmorrhage. The wound was dressed antiseptically, and the patient ordered to remain in the recumbent position. At the end of the fourth day the remaining portion of the pedicle sloughed off without any hæmorrhage. The itching on the outside was treated in the ordinary way, and at the end of two weeks all discharge from the rectum had ceased; the outside parts healed, and he had apparently recovered and said that he felt better than he had for years. That being one year ago, and the pruritus had not returned up to a few weeks since.

I could enumerate many cases of a similar nature, but which, though interesting to me, would not be to you since many of you perhaps do not see a very great number of these cases.

In summing up, I will say that the important point in the treatment is to ascertain the cause, and if you find that the pruritus is a result of some other rectal disorder requiring surgical procedure, it is best to operate at once and not wait months and, in many instances, years in making local applications for the immediate relief of the itching which have no curative properties in themselves until after the immediate cause has been removed.

Frederick S. Thomas, M.D., Council Bluffs, Ia., Professor Diseases of the Mind, Omaha Medical College, read a paper entitled

GENERAL PARALYSIS, WITH A REPORT OF TWO CASES.

General paralysis is not only a variety of insanity, but a true cerebral disease. According to Clouston it is "as distinct from any other disease as small-pox is from scarlatina." Being a distinct disease clinically and pathologically, it can be defined, and the following definition is given on account of being comprehensive:

"A disease of the cortical part of the brain, characterized by progression, by the combined presence of mental and motor symptoms, the former always including mental enfeeblement and mental facility, and often delusions of grandeur and ideas of morbid expansion of self-satisfaction: the motor deficiencies always including a peculiar defective articulation of words, and always passing through the stages of fibriller convulsions, incoördination paresis, and paralysis; the diseased process spreading to the whole of the nerve tissues in the body; being as yet incurable, and fatal in a few years."

This disease, for convenience sake, has been divided into three stages, the *first* of which is that of fibriller tremblings and slight incoördination of the muscles of speech and facial expression and of mental exaltation with excitement; the *second*, that of muscular incoördination and paresis with mental enfeeblement; and the *third*, that of advanced paresis, or no power of progression, almost inarticulate speech, and at last paralysis with mental extinction.

I desire to report two cases before this society.

Case 1.—J. W., a fine, strong, handsome man of 36 years, without any known hereditary predisposition to insanity, had enjoyed good health up to the time of his present attack. His temperament was sanguine, and he possessed a cheerful disposition, but hasty, and at times boastful. He was fond of making money and preferred the gaming table to more honorable means for a livelihood. He was not dissipated in the worst sense, but he lived freely, taking considerable alcoholic stimulants habitually, eating fairly well, sleeping generally too little, and in regard to sexual intercourse about the average of those of his class.

No history of syphilis could be obtained. For a month or more prior to the death of his wife, acquaintances had noticed his desire to accumulate large amounts of real estate, in some instances paying five or ten dollars as options and promising within thirty days to take the property by paying very large sums of money therefor.

At the grave of his wife he broke completely down and had to be controlled by his friends; was declared insane and sent to one of the hospitals for the insane of our State.

He was quite noisy for awhile, but soon passed into the second stage, was classed "incurable" and was sent to St. Bernards' hospital of Council Bluffs, where he is at the present time.

He is now in the commencement of the third stage; has the appearance of a man of sixty. He is losing flesh gradually, his eyesight is failing rapidly and his walk is more tottering every week.

Case 2.—C. J., a Dane, about 30 years old, resident of the same city for eight years. Was engaged in the saloon business part of the time; accumulated a little property, was quite a free drinker of alcoholic stimulants. His temperament phlegmatic with occasional evidences of irritability and temper. He was somewhat maniacal when first seen by me, with a strong desire to burn his property and kill his wife.

As soon as the stage of excitement passed off he began showing marked symptoms of general paralysis. His speech was thick, his lips showing, as he began speaking, that fatal quiver which marks the disease from all others.

His walk was not firm, and in turning round sharply he did so with uncertainty.

He is at the present time in the second stage of the disease. His weight has increased during the last three or four months by accumulations of adipose tissue, a condition sometimes found in this stage of the disease, and there is some puffiness about the eyes. He sleeps a great deal, in fact, it is not uncommon to find him asleep or in a stupid condition sitting upon one of the benches of the ward.

The patella reflex is nearly absent. He eats well, and at times becomes talkative, but his usual attitude is that of repose, and his behavior that of dreamy indifference.

His eyesight is gradually failing and he seldom asks about any person and never about his wife.

I have thus hastily spoken of two well known characters in the male ward of St. Bernard's Hospital

These are somewhat typical forms of this disease.

The usual course of this disease is here fairly well illustrated. The pathological appearances in the brain in general paralysis as found by those who have made careful study of same is about as follows.

The encasings and supports of the organ (the brain) are all found to be affected, and the longer the case has rested the more marked are the changes met with. The bones of the calvarium are denser and harder, in many cases the diploë being obliterated, and in many others there is a distinct layer and deposit of new bone on the inside of the inner table of the skull-cap, this being usually of frontal and parietal bones.

In a number of cases there is found under the dura mater, and attached to it, lying between it and the arachnoid, a new substance of a morbid and peculiar kind, commonly called a false membrane. It varies in consistence from the fibrous texture of the dura mater itself to a fibreless jelly. In color from a grayish-white to that of a blood clot; in thickness, from film to a quarter of an inch; in extent, from a small patch or two to a covering of both hemispheres, above and below.

The arachnoid is immensely thickened, and either mottled with white spots or striated along the sulci with white

fibrous looking bands. Under it there is what looks like a dull opaque jelly, through which the convolutions dimly appear, and under which great tortuous congested veins meander. Should the arachnoid be pricked, a dirty opaque fluid will escape, being from two to six ounces, that had served really as a compensatory fluid, filling up the space left vacant by the atrophy of the convolutions and brain generally.

The pia mater is thickened, vascular, and tough to an enormous extent. When the pia mater is removed from the convolutions, it is found to adhere to and raise up portions of the outer layer of the gray substance.

The whole gray matter is thinner, especially in the cases that have lasted long. The white substance is often very congested. On opening into the ventricles they are nearly always found enlarged, and the normally delicate epithelial linings are toughened and very rough. There is no nerve tissue that is not found diseased—the retina, the peripheral nerves, the sympathetic ganglia, etc.

What then, is the cause of general paralysis? There can be no doubt that the gray substance in the convolutions in the brain of man is the highest in quality and function of any organic product yet known to nature. That substance reaches its highest development in the male sex between adolescence and middle life. Its uses are called forth in the highest degree in the enlightened races of Europe and America who live in towns or cities. Its physiological abuses by alcohol and other poisoning, by over-strain, by violent energizing stimulated by continuous strong mental and other stimuli up to the point of exhaustion, are the most common under those circumstances. It is a quality of nerve tfssue to degenerate in the lines of physiological activity, when that activity ceases either in a higher centre or in the part innervated. General paralysis is a disease of the outer layer of the cerebral convolutions—of the mind tissue in fact. It is in reality a death of that tissue, a premature and sudden senile condition; senility being a slow physiological process of ending, while general paralysis is the quick pathological one.

SECOND DAY—AFTERNOON SESSION.

The Society was called to order at 2 P.M. T. J. Beattie, M.D., of Kansas City, Mo., read a paper entitled

METRORRHAGIA OCCURRING ABOUT THE MENOPAUSE.

Within the last few years much progress has been made in nearly every department of gynecology; but notwithstanding this fact, there are some troubles, the etiology of which are still obscure.

For years past it has been conceded by many physicians and has been a belief among the people at large, that when a woman reaches the period of decline of the menstrual function, she nearly always has alarming hæmorrhagic discharges. So universal has been this belief, that when they come in contact with a case of menorrhagia or metrorrhagia in one advanced in life they are satisfied with the diagnosis, that she is in the change of life. Let us consider for a moment the significance of this term, and probably we can treat the subject more satisfactorily.

A girl reaches the age of thirteen or fourteen years, her physical development is more rapid than at any other time; the sexual organs develop rapidly and in a short time, usually preceded by some feeling of weight in the region of the pelvic viscera and of general indisposition; her menstrual flow appears. This flow recurs periodically unless interrupted by pregnancy or some pathological condition, and continues at intervals of about four weeks for a period of thirty years, when she will have reached the age of forty-five or forty-six years. Now her general system, especially the genital organs, undergo a retrograde change.

The periodical flow is scant, irregular and gradually ceases, this is accompanied by a change in the ovaries, they become smaller, the Graffian follicles lose their functionating properties and the organs become contracted, hard and of a pale, whitish appearance, the Fallopian tubes, uterus and vagina—in fact, the entire genital organs undergo a change, which is retrograde in character, until they assume as nearly as possible, the condition that existed previous to the development of the menstrual function. This is about what is provided for by nature, in case she passes the menstrual period physiologically, but how many women pass through this period, without some condition which tends to leave the uterus or its appendages in a diseased condition? Ask yourself how many women you come in contact with, who are advanced in life and have not had troubles that would tend to show some pathological condition. It is for this reason that we find so many women, advanced in life, who are brought to a condition of great weakness on account of the frequent hæmorrhagic discharges.

Our text-books say that these hæmorrhages may be due to a want of resistance to blood pressure, senile rigidity, softening and relaxation of the uterine tissues, or to vasomotor disturbances. No doubt this is true, but in a large percentage of cases, you will find some other cause, which has at least greatly assisted in bringing on this condition.

My object in writing this paper is to urge the more careful examination of women who are troubled in this way, and I am certain, in every case where there is profuse hæmorrhagic discharge, whether it occurs at the change of life or at any other time, you will find a cause, the relief of which will cure the troublesome and many times dangerous condition.

Women who are troubled in this way have usually borne children, and frequently it is possible to trace the cause of their present condition to one of their previous confinements. If involution has been interfered with from a laceration of the cervix or perineum, if the organ is engorged as a result of inflammation of the uterus or surrounding structures, or if a portion of the placenta remains after miscarriage or labor at term, or if from any cause there is an interruption to the free return of the circulation, the uterus is congested, the ovaries and Fallopian tubes become tender and engorged, and the cellular tissue around the organ becomes irritable. If this condition remains, the endometrium is likely to assume a thickened, spongy, varicose condition, which soon becomes aggravated at each subsequent menstrual period. If one is in the decline of menstrual life, and this condition still exists, it is likely to produce alarming, and many times dangerous, hæmorrhagic discharges.

Some time ago, I was summoned hastily to see a woman who was having, as they termed it, a hæmorrhage. When I arrived I found my patient, a woman 48 years of age, the mother of seven or eight children, in a very weakened condition, not only from this attack, but from the frequent occurrence of hæmorrhagic discharges. After making a hasty inquiry into the nature of the trouble, and deeming it necessary that the hæmorrhage should be checked, I made several rolls of cotton, and with them packed the vagina as thoroughly as possible; this I thought sufficient to check the flow of blood, but gradually it made its way through the pledgets of cotton, and I was summoned again. This time I was not satisfied with the vaginal tampon, but removed what had been applied before, and injected about 2 drachms of Monsel's solution directly into the uterine cavity, and then applied the cotton.

Before leaving this time, the patient, who was very much exhausted from the amount of blood lost, said in a weak and trembling voice, "Doctor, I am in the change of life." She had consulted a physician, some time before I saw her, for

metrorrhagic and menorrhagic attacks that had been recurring, and was satisfied when he told her that she was in the change of life. The treatment above mentioned succeeded in controlling this attack, and a short time afterwards I examined her case carefully. The uterus was large, tender, the structures around it were in an irritable condition, the cervical canal quite patulous, and the sound passed to the depth of $2\frac{1}{2}$ inches, followed by flow of blood; the endometrium was quite tender, and covered with fungoid growths. After removing these growths by curetting the endometrium, applying stimulating intra-uterine applications, she began to improve. Her general system was built up by tonics, fresh air and good, nutritious food. She has not had a recurrence of the metrorrhagia, but her flow is irregular and scant. Am satisfied that within a short time her flow will cease.

My attention has been especially directed to this subject on account of a number of women who have come under my care in the decline of menstrual life, suffering from metrorrhagia, who have received extensive lacerations about the cervix, and I am of the opinion that they act as a great factor in causing this trouble. Some one may ask, Why has the laceration not troubled them long before? A woman may have quite an extensive injury to the cervix, and still her general health not become seriously impaired; but when it is very extensive, and a woman reaches the time of life when the organ undergoes a retrograde change, there is a lessening in size of the uterus.

Should this contraction be unsymmetrical, which is likely to be the case if much cicatricial tissue exists, the cervix may become closed or very small in size, while the body is still large, and the glands of the endometrium remain quite active. In this way we may have gradually accumulating fluid that will at some future time be expelled, and keep the organ in a state of congestion. My attention was first directed to this subject by an article entitled "The Menopause," by Dr. T. Gaillard Thomas, in which he says: "As the uterus undergoes atrophy, that of the cervix may be out of proportion to the atrophy that is going on in the body. As the body of the uterus contracts, the cervix contracts to a greater degree, and gradually closes, while the uterine mucous membrane is still giving forth a discharge of mucus, as any uterus is apt to do, and the cervix shuts itself up together and prevents the escape of this fluid." I am of the opinion that this is more likely to occur in women who have received extensive lacerations that have never been repaired.

Dr. B. F. Baer, in a paper before the Obstetrical Society of Philadelphia, March 6, 1884, says that in 2,200 cases collected by him, 1,533 occurred between the ages of 20 and 40 years, and 667 for all other ages; only a small percentage occurred during or after the menopause. He also says there were some that when such did occur in the later periods of menstrual life, there was some pathological condition causing it. At this period of life we may come in contact with cases, where no trace whatever can be made as the result of gestation. It is a peculiar fact that some women have a susceptibility to hæmorrhagic attacks, where no perceptible cause can be ascertained, but simply an inherited tendency to a highly vascular and relaxed condition of the organ; these cases are not common, but when it does exist, should the bowels become sluggish, which is a very common factor in almost every trouble, we may have the circulation interfered with, causing an engorgement of the uterus and surrounding structures. If one is in the decline of menstrual life, it may be a great factor in causing profuse hæmorrhagic discharges. One of the most frequent causes of this trouble is growths in or near the uterus. We may have an interstitial fibroma or a polypus suspending itself from some part of the organ.

There is another class of cases, the early diagnosis of which is of great importance. I refer to malignant disease existing in the cervix or body of the organ; it is for the possible existence of this disease, that physicians should always inquire carefully into the etiology of hæmorrhagic discharges during the later periods of life. When malignant disease exists, and can be detected early, we are now in a position to do more to at least alleviate her suffering and prolong life, than we have ever done before. For ages this disease, even in its incipiency, was looked upon as probably the most troublesome of all ailments. Quacks, in their eagerness to deceive patients, have contended that they have specifics for the cure of cancer. As yet we are to find a remedy to eliminate from the system the real cause of this very troublesome and aggravated disease. When it can be detected in its incipiency and entirely removed, its growth may be stopped, at least for a time, but the cause still exists, ready to spring into activity and produce trouble in the most susceptible organs. It has been a disputed question among the leading pathologists and clinical investigators, as to whether or not this disease is of local origin.

In this brief paper I do not care to discuss this question, but again emphasize the importance of carefully investigating every case of metrorrhagia and menorrhagia occurring at the decline of menstrual life. You will many times find a cause, the relief of which will overcome the troublesome hæmorrhage.

J. C. McClintock, A.M., M.D., Professor of Surgery in the Kansas Medical College, Topeka, read by title the following paper:

GUNSHOT WOUND OF THE CHEST—REPORT OF A CASE.

Miss K. H., a young lady of 24 years of age, was shot on the evening of the 23d of September, 1891. The revolver was held at a distance of not more than 8 feet. The wound was temporarily dressed. I saw the case the morning of the 24th, six hours after the injury. The ball from a 38-calibre revolver had entered $\frac{1}{2}$ inch to the right of the spinous process of the eighth dorsal vertebra, had passed directly through the body and fractured the sixth rib in front. The ball was located under the right mamma, through which an incision was made and its removal effected. Its location was diagnosed by the fracture of the rib, by emphysema into the cellular tissue, and by palpation the ball itself could be felt. The patient was expectorating small quantities of blood, was somewhat cyanotic, but was evidently rallying from the shock of the injury. The pleural cavity was filled two-thirds full, probably with blood. A very grave prognosis was given, from the fact that the lung and pleura had undoubtedly been perforated, and that decomposition of the blood in the pleural cavity would almost surely follow. Such decomposition would necessitate opening the chest for drainage. Such a procedure was not further indicated, however, for the progress of the case was toward recovery. There was no fever, no complication of any kind. The wound of entrance of the ball, and that from which the ball was removed, united without suppuration under occlusive dressings.

The first dressing was removed at the end of a week, on account of pain in swallowing. This pain was relieved after the patient was able to be turned on her side, and the second dressing was not disturbed for three weeks.

A note under date of October 31, six weeks after the injury, says: The patient's right lung now occupies only a little more than the upper third of the pleural cavity, the lower and back part of the pleura being still filled with blood. She has been sitting up for about two weeks, and walks about the house. Nothing but a guarded prognosis has been given in this case at any time.

March 17, 1892. An examination of the patient to-day warranted me in pronouncing her perfectly well. The vesicular murmur was clear and distinct in the lower lobes of the lung, and there was no dulness over the region formerly filled with blood.

Daniel Morton, M.D., St. Joseph, Mo., read by title the following paper:

LA GRIPPE OF THE LARYNX.

The true cause of influenza is still a *crux medicorum*. Da

Costa has recently said: "The malady is generally assumed to be due to a microbe. But this is but a probable and intelligent assumption, for the microbe has not been found." Since these words were written, several investigators have claimed the discovery of the offending bacterium, and Koch is almost willing to admit its isolation. If the Pfeiffer–Canon bacillus is the criminal, we certainly must admire the agility with which he, the smallest of the bacillus family, skipped around the globe in the short time of six weeks, and put the whole world to sneezing and coughing. Whatever the etiology may be, however, clinically it is certain that the respiratory passages suffer more than any part of the body. For the first time in the history of Los Angeles, lobar pneumonia appeared during the present epidemic. And it is one part of the respiratory system at a time too, not the entire tract, that is affected. The disease seems to localize itself, just as chronic gonorrhœa consists of diseased patches scattered along the urethral canal. In some symptoms of pneumonia are present, but no physical signs to bear out the diagnosis. In two post-mortems on cases of this kind at the extremes of life, enormous œdema of the lungs was found, the word "juicy" lung describing the condition perfectly. In some a bronchial catarrh is present from the beginning, but in the majority of cases, hoarseness and noises in the ear indicate involvement of the vocal cords, the Eustachian tubes and tympanic cavity. Hoarseness is a symptom often making its appearance at the very beginning, and constituting the only prominent symptom. Again, it has appeared only after the attack had apparently spent its force, and the patient was prepared to believe himself recovered. This latter condition, in my observation, has proven far more serious in its nature than the former, the hoarseness persisting for many days and weeks, and sometimes for months. One case that I saw in consultation with Dr. J. W. Leonard, twelve months after an attack of influenza, was able to talk only in a whisper. There was no cord paralysis whatever, and to-day he has entirely recovered his voice. Those suffering at the very beginning recover the use of the voice much more rapidly and completely. Aphonia has been noticed in none, the hoarseness never going beyond inability to whisper, and varying in every imaginable tone from this to the natural voice. Often accompanying this symptom is a lack of confidence manifested by the patient in the power to control the voice, and many adults who had long since passed the time of life when the voice changes, seemed to return to this unpleasant stage of vocal development. A minister under my care was kept in constant uneasiness during the delivery of his sermons, for fear he would startle his hearers by vocal gymnastics not altogether *apropos* to the subject matter of the discourse. A certain amount of pain accompanies all attempts at vocalization in the earlier stages, but when the huskiness becomes chronic this entirely disappears. In some cases, after the voice is restored to its normal tone, a relapse occurs, and after a second restoration dysphonia again makes its appearance. Hoarseness may be caused by looseness of the vocal cords due to paralysis of the tensors of the cords, the crico-thyroid muscles, or by inflammatory thickening of the mucous membrane lining the cords, but I should like to emphasize the point that hoarseness, which is considered the most characteristic symptom of a laryngitis, may be caused by disease entirely extrinsic to the larynx itself. This is the case in aortic aneurism when pressure produces paralysis of the organ.

Tickling of the Throat is quite common in a large number of cases, and is one of the most stubborn symptoms to relieve. It may cause no special annoyance, or it may be so severe as to produce a cough that will harass the patient to a serious degree. I do not refer to the tickling of an elongated uvula. This "Isrip cough," as it is called, perhaps gives more annoyance to the physician than any other symptom. It often does not appear save at night, when it deprives the patient of rest and may reduce him to a serious degree of nervousness. When persisting for weeks, as it often does, unless properly treated, it is plainly perceptible how such a result may be produced. There is no expectoration except a glairy mucus resembling the white of an egg well whipped. Treatment directed toward the lungs is wholly ineffectual. Ammonia, scilla, paregoric, ipecacuanha, chloroform and the whole list of cough remedies are of no avail. The source of irritation is in the larynx and trachea, and the remedies must be addressed to these parts. I do not here refer to the cough of a granular pharynx, nor to one produced by hypertrophied tissue at the base of the tongue. Physical examination of the lungs will fail to discover a single râle.

Laryngeal examination shows a reddened and thickened mucous membrane lining the larynx above the true cords and covering them as well. Epiglottis congested and twigs of blood vessels plainly perceptible on the laryngeal surface, some branches projecting over the edge. The abductors and adductors in perfect condition, so that the cords are easily approximated or separated at will thus ruling out any paresis. Nothing to account for voice-huskiness except thickening of mucous membrane covering cords. Later on the mucous membrane becomes dry and then follows tickling and consequent cough. The pharynx and naso-pharynx and nose are coincidentally affected also, though not to the same degree.

The constitutional treatment will vary according to the views of the physician as to the origin of the malady. He is the most successful specialist who recognizes the existence of diatheses, who looks for a constitutional habit in his patient and who combats this condition at the same time that he is employing local treatment. There is a cachexia and the laryngitis is simply one of its manifestations. Treat the cachexia as well as its manifestation.

I will not review the innumerable plans of treatment. Phenacetine for the pains, salol and salycilates, lithia, or lithia waters—Garrod, Spa, Sander, to assist in the elimination of urea products, whisky as a stimulant, Dover's powder as a sudorific, cocoa preparations as an anti-melancholic, maltine with yerba santa, strychnia as a nerve tonic, have been the chief remedies employed, using first one, then another as indications demanded.

Locally I have used albolene and liquid petroleum sprays containing in solution eucalyptol, menthol, iodine. Argenti nitras is particularly useful, especially if the remedy be applied to the pharynx as well as larynx. I have never treated these cases without, at the same time, correcting any lesions in the nose and pharynx. Counter-irritation over the larynx and trachea, especially with the cautery, is very useful.

In recapitulation, allow me to say that laryngitis associated with influenza is particularly severe in its nature, post la grippe hoarseness is the most stubborn form to treat, relapses of dysphonia are very frequent, the "grip cough" is a laryngeal cough, the treatment must be largely constitutional.

P. I. Leonard, M.D., St. Joseph, Mo., read by title the following paper

PRESENT PROBLEMS IN BACTERIOLOGY.

Upon the medical horizon we see the dawn of a new world. The science of medicine is in a state of transition and the vast progress made recently gives fair promise of a new epoch in the conception of disease and in its mode of treatment.

A study of bacteriology and biological chemistry interests the practical physician, as he expects to derive useful information for the prevention and the cure of disease.

The present problem of bacteriology is to explain the true

relation existing between the bacteria and their products to the cells and juices of the living organism in health and disease.

From the mythical in medicine we advance to the theoretical, and the step that is being made promises to inaugurate rational practice based upon definite knowledge.

In taking a retrospective glance of the history of medicine and in comparing it with the great advance of to-day, we should not vaunt out preëminence too highly, for the judgment of posterity will accuse our own time of human weakness and blame us for our want of foresight.

By disease we understand a deviation of some of the vital manifestations from the normal. The difference in reaction to an injury or a poison setting up grave disturbance in one tissue or organ, while they are harmless to others, gives evidence of a specific predisposition of individual tissues to a specific disorder. When we regard the great variety of diseases and the great diversity of structure, and therefore of predisposition, we can see the great difficulty of determining the true nature and origin of disease in man.

Humoral pathology which referred the origin of disease to an abnormal condition of the blood, solidar pathology to the tissues and dynamic pathology to unseen forces, but especially to the nervous system, all took a one-sided view of disease and now they are only of historical interest. Virchow has given us cellular pathology, which comes very near answering all the questions involved. Pasteur and Koch have started a new system called bacteriology, and their ardent disciples have attempted to explain all disease through the action of parasites.

Although there is a lively reaction against pathogenic microbes as the first cause of disease, some speaking of "the rise and fall of the microbe," inferring that it will only be of historical interest in the future, we are still waiting for decisive proof.

It matters not how complete experimental pathology and bacteriology may become, for the certainty of results regarding the pathological physiology of man, we must recur to the clinical observer. However great the similarity between the organization of man and the higher animals, it is still only so by analogy and never to be considered exactly the same. For instance, we can never have identical brain or nervous diseases. There is an immense gap between bouillon and gelatine plates to the cell life of a human organism. The fact that many acting causes of disease in man are inactive in animals, shows that there are fine differences in the respective chemistry of the blood and the juices at present unknown. The highest task of general pathology is to teach us a knowledge of the laws of disease, and we will never understand these if we pursue any narrow path of investigation and reasoning.

It is the tyro in science who is generally so positive about his deductions, and to him mere possibilities crystallize into realities.

It cannot be denied that microörganisms sustain a very intimate relation, especially to the infectious diseases, but their mode of action in a causal relation is as yet wrapped in a mist of vagueness and uncertainty.

An infection is due to a poison derived from man, animals or a miasma, capable of further development, and which (in contra-distinction to an intoxication) depends more upon the quality than the quantity of the virus. The origin of the infection is external, and as we find bacteria capable of this "further development" by their powers of multiplication, and while they are intimately associated with infectious diseases, we infer that they stand in a casual relation.

Bacteria which are supposed to possess these infectious qualities are pathogenic, and those which are harmless are non-pathogenic. But matters are not quite so simple, as we shall see.

We cannot draw a line separating pathogenic from non-pathogenic bacteria, they are nosogenic under some conditions, and harmless under others. When bacteriologists begin to attempt a demonstration of the power of pathogenic organisms the difficulties begin to assert themselves. For instance, virulent and attenuated bacilli anthracis cannot be told apart, and they occupy the same relation as pathogenic and non-pathogenic.

We use this classification for the reason that we have no other. The mutability of bacteria is a problem with such men as Nägeli, Davaine, Buchner and Wernich in its favor, while Koch and his pupils claim the pathogenic bacteria to be specific organisms. Nägeli says that there is no need even of a division into two specific forms, and he says the same organism may bring about the sourness of milk, the fermentation of wine or the putrefaction of albuminous substances, sometimes producing typhus fever, cholera or intermittent fever.

Pathogenic organisms act mechanically by their presence, by withdrawing nutrition and oxygen from the cells, but their chief and most important quality is their poisonousness or virulence. If we regard the relation of the microörganisms to the essence of the disease, we wish to know whether the organism is identical with the virus, or if the latter is the product of the former. The excretions of pathogenic organisms have been studied by Brieger and others, who have separated a large number of toxic alkaloids of unstable composition known under the general name of ptomaines. In all infections we find bacteria with different excretions. Brieger separated from the cholera, typhus and tetanus bacilli specific substances, proved to be genuine toxines, which, if inoculated into animals, produced analogous symptoms to those caused by the bacteria themselves. From this knowledge the pathogenic action of bacteria is principally explained, and as one kind can excrete several of these toxic poisons, under different conditions, they are subject to considerable variations.

Roger proves that the harmless bacterium prodigiosus in conjunction with another harmless bacterium can become the cause of disease. Pasteur and Chamberland have separated, by means of filters, the organisms from their excretions, and the latter without germs showed no difference in the effect. These ptomaines may be taken in as food and are therefore of interest.

We have also a difference in the virulence of bacteria in different animals. The bacilli of glanders are particularly virulent on field mice, while white mice are immune. By feeding the latter with phlorodzin, he produced in them a diabetic condition, and they became inoculable. Bujevid says that staphylococci aureus have no effect on the subcutaneous cellular tissue of the rats and rabbits unless you mix the solution with sugar, and then you produce a strong suppuration. Nearly all bacilli lose their virulence gradually on artificial foods, in adding drugs to the cultures, in passing them through animals, breeding them under pressure and in exposing them to a high temperature. White rats are insusceptible to anthrax, and according to Behring their blood and tissue juices possess an extremely high degree of alkalescence, so that the bacilli cannot live in it.

The composition of the blood is the special expression of the metabolism of the cells, it has no definite chemical formula, nor is it always uniform. Any species of bacteria introduced into the blood vessels disappear, thence, in a short time. Wyssokowitsch says they go to the spleen, liver or spinal marrow, and there either perish or multiply, are infective or harmless.

Behring has shown the germ-killing power of the blood, and Nuttal that of the aqueous humor, ascitic fluid, and other juices of the body. Buchner says the plasma of the

blood destroys the bacilli, the power depending upon the salts which stand in intimate relation to the albuminoid matter, the quantity and quality of the latter allowing organisms either to grow or to die. This germ-killing power of the blood disappears under the influence of a high temperature, consequently fevers would offer an inducement for the bacilli to grow. If the body resists the invasion of an infectious poison, it is immune against this special morbific agent. Buchner says of congenital immunity, that it is something specific, dependent on the specific physiological properties, on the one hand, of the generating factors of disease; on the other, of the animal body or its individual organs and tissues. He has three conceptions as to the origin of immunity:

1. Want of nutritive material in the tissues and juices, whereby the bacteria are destroyed.
2. Phagocytosis and chemotaxis.
3. Prophylactic substances in the animal juices.

It is probable that the processes by which the body resists infections are chiefly of a chemical nature, and that the body furnishes antibiotic or antitoxic influences for its protection. Phagocytosis is entirely insufficient by itself to take much share in the protection of the body, as it is most reasonable that leucocytes can only attack debilitated or dead bacteria. This hand to hand encounter and struggle for survival between bacteria and leucocytes is very romantic, but the majority of observers deny this property of phagocytes.

Mr. Kauthak, at a recent meeting of the Pathological Society of London, maintains what is probably our present state of knowledge about immunity. He said: "The primary cause of immunity must be sought beyond the leucocyte or phagocyte, and also beyond the fluids of the body, and, according to the maxims of cellular pathology, depend on changes in the cell life of the organism, which at present we were unable to understand."

Many experiments have been made to produce artificial immunity by taking the extract of the tissues or the blood of an animal enjoying immunity as a remedy against the corresponding infectious disease. Pasteur, taking for granted that cow-pox virus is an attenuated form of small-pox virus, is said to have succeeded in producing immunity in chicken cholera, anthrax, swine erysipelas, and in hydrophobia.

Hankin claims that a few drops of rat's serum injected into a mouse rendered it as insusceptible to anthrax as the rat.

Dr. Wright says he has recently confirmed Woolbridge's experiments of producing immunity against anthrax by the injection of tissue fibrinogen—a nucleo-albumin.

Klemperer says that in animals one attack of pneumonia causes a temporary immunity against another, but this does not hold true in man. He says the pneumococcus generates a poisonous substance which can be isolated—pneumotoxin, this can set up a febrile condition which lasts several days, after which another substance is found called anti-pneumotoxin which neutralizes the pneumotoxin. The crisis of pneumonia occurs as soon as anti-pneumotoxin is produced in sufficient quantity. Klemperer claims to have cured pneumonic septicæmia by injecting the serum of immune animals directly into the circulation.

Behring and Kitasato claim to have done the same for tetanus and diphtheria. Emmerich adds to this list swine erysipelas and croupous pneumonia.

Bouchard and Emmerich claim to have cured rabbits inoculated with virulent anthrax bacilli by bringing a considerable quantity of erysipelas micrococci, of green pus or other micrococci, into the circulation either before or after the anthrax inoculation. These facts are interesting, but in the attempt to apply them to the human body we are unpleasantly disappointed.

From the ground we have covered we see that but few, if any, bacteria are in a position to answer the requirement necessary, as laid down by Koch and others for a pathogenic organism. In each species there are links wanting for certain proof, and perhaps the famous bacteria are more of a consequence than a cause of disordered action.

Chemical biology shows that each living cell is a factory of toxic alkaloids called leucomaines, and if they are not eliminated from the body, they act powerfully upon the nervous centers, and become the first cause of a pathological disorder.

To cite an example, the life action of muscle and nerve cells and other of our tissues, results in breaking up the protoplasm into other leucomaines. Creatinine and anthocreatintine are produced by muscular activity, and in excess in the blood they cause feelings of depression, drowsiness, extreme fatigue, and may be even vomiting. Great depression following excitement is probably the result of an accumulation of an excess of leucomaines in the blood.

Brunton thinks biliousness is most likely due to formation of poisonous alkaloids in those who eat largely of proteids. The liver, kidneys and other organs are now believed to have a constructive as well as an excretory function, and our knowledge of diet, digestion and nutrition are continually changing owing to the advances made in physiological chemistry. Brown-Séquard and D'Arsonval assert that each gland of the body has two functions first, that of secreting a substance from the blood, and second that of supplying to the blood some needed constituent, and it is these latter substances they propose to obtain and to use therapeutically. They report a number of cases of ataxia, diabetes and pulmonary tuberculosis which have been benefited, but these men who experiment are a good deal like those surgeons who always find in the abdominal cavity what they are looking for. Hankin gives a physiological classification of these defensive proteids and he divides them into sozins, which are proteids present in the normal animals, and into phylaxins or those proteids present in immense animals. Myco-sozins and myco-phylaxins act by killing microbes, while toxo-sozins and toxo-phylaxins act by destroying the microbic products. To what all these things will lead is difficult to guess, because so little is definitely established, and yet, again, we are in possession of a great deal of information in the right direction.

In the light of our present state of knowledge of the bacteria and the body cells, if protective vaccines fail, at any rate, we are warranted to draw the following practical inferences in the treatment of infectious and toxic diseases. The body protects itself against auto-intoxication and infections by the eliminating powers of the kidneys, the alimentary canal, while the liver is supposed to act as a filter for the body. If the hepatic organ masters the infective or toxic agent the body is protected, if not, there is a systemic intoxication or infection. Consequently we derive a chief general indication for the maintenance of health and the treatment of all diseases in watching the excretory organs and in the proper use of diuretics, sudorifics and purgatives.

On motion, the society adjourned to meet at Council Bluffs, Iowa, third Thursday in September, 1892.

Chicago Medico-Legal Society.

March 5, 1892.

(*Continued from page 463.*)

Harold N. Moyer, M.D., Adjunct Professor of the Practice of Medicine, Rush Medical College, Chicago, read a paper entitled

EXPERTS AND EXPERT TESTIMONY.

It is apparent that in a simple state of society where all

individuals are engaged in similar occupations, jurisprudence must find its simplest expression. In a community composed largely of farmers each man is an expert in matters of agriculture and the litigation of such communities must partake of the simple character of its occupations. The same will be true of any community, of small numbers widely scattered, in which each individual largely performs most offices for himself.

When, however, we aggregate individuals and segregate employments there is a more complicated social fabric. Particularly will this be true in those communities in which employments are specialized to a great degree. Where handicrafts and professions are differentiated to such an extent that each individual devotes his entire attention to a particular production or subject, it is manifest that by so doing he acquires particular and precise knowledge, much greater than that possessed by the general average of the community.

One of the most distinguishing marks of our modern civilization is the unparalleled differentiation and specialization of employments; so complete is this that each individual is more and more dependent on every other individual. In proportion as these influences are extended and accentuated, the jurisprudence of our times must become more complicated.

Take for example, the common carrier, a business that now represents billions of capital and indirectly hundreds of thousands of persons. It furnishes a vast amount of litigation that was unheard of when English law was new. Whether spinal concussion existed in those days we are not now able to say, but it could scarcely have been a contention in a suit at law because people so rarely exposed themselves to the negligence of a common carrier. Contrast this primitive condition with the present age, in which millions of people daily commit themselves to the care of others. The slightest negligence of whom, resulting in personal injury may furnish ground for litigation. Is it not a matter of wonder that suits of this character are as infrequent as they are?

It goes without saying that the increased differentiation in employments has produced a vast army of men, perhaps one-half of the active part of the community, who are especially skilled in some direction, and who have expert knowledge of some particular process or trade; it is but natural that courts should endeavor to avail themselves of this knowledge. Indeed the administration of justice, in our day, would be practically impossible without such aid.

Granting then that we have shown the necessity of expert evidence and that this necessity will probably grow as time advances, and our civilization becomes more complicated, we may at once pass to a consideration of the present standing of experts in courts, the manner in which testimony is introduced, and to a discussion of what, if any, improvements can be made in present methods.

At the outset we will concede that the present system is not perfect. But, we would be pleased to have some one point out some system that is perfect. Even the administration of the law can scarcely be considered too accurate when it is necessary for our appellate court to reverse and remand nearly one-half the cases considered at a single term—a brief examination of our drainage system would convince one that the Creator was wise when he kept the ordering of the planets and stars as His own special business. These and like examples ought to teach us that absolute perfection is rarely attained in human affairs, that the true measure is one of utility and adaptibility. No measure or system should be condemned merely because defects may be found, but the question should always be asked, is it the best that can be done under the circumstances?

The law makes a broad distinction between matters of fact and matters of opinion. It is apparent that opinion evidence to be of any value must be given by some one who has special, that is more than ordinary knowledge of the particular subject, in other words an expert. As to who is, and who is not an expert, must be largely left to the particular circumstances in each case. The ordinary witness shades into the expert, just as ordinary testimony passes by imperceptible degrees into opinion testimony. For example, in a matter of insanity, a non-professional witness may give his opinion as to the mental condition of a person because he has expert knowledge—that is, knowledge not possessed by the general community, of the character and habits of the particular person. Of course, such testimony does not equal in value that of one who has been long trained in the study of normal and aberrent mentality, though in a way it is quite as expert. The instance cited, shows that it is impossible to draw a hard and fast line between the expert and the ordinary witness. And this is one of the chief difficulties in suggesting improvements in the present system.

As one of our judges puts it: "An examination of the cases in which the courts have passed on the competency of experts shows a lamentable confusion and mixing up of matter of fact with matter of law." The true reason of this obscurity has never yet been stated, but has always been referred to defective statement or confused rulings, when as a matter of fact it is a difficulty inherent in the subject itself. It is the same difficulty that we have in measuring mental capacity, we assume an arbitrary line beyond which a person is considered to be insane, when nature makes no such distinction. Sanity and insanity shade into each other, just as twilight passes into darkness, but no one can give the exact point where one leaves off and the other begins; the result has been that no satisfactory rule of law for measuring mental capacity has yet been formulated. And for the same reason, because there is no natural division between opinion testimony and that relating to facts, there has been a wide diversity in ruling. No jurist seems to have yet discovered this as the true cause of the "lamentable confusion" observed in the deliverances of our courts.

In addition to the confused rulings as to who are experts we find a wide variation in the opinion of courts as to the value of expert medical testimony, for instance: The Supreme Court of Illinois has said if there was any kind of testimony not only of no value, but even worse, it was that of medical experts; while the supreme Court of Texas says that the opinions of medical men are received with great respect and consideration. Again the Supreme Court of Michigan says that the scope of medical testimony ought not to be extended, while the Supreme Court of Pennsylvania finds the knowledge and experience of medical men of great value. In the light of such contradictory statements, we must either conclude that there is an immense variation in medical qualifications in different parts of the country, or else that the dictum of our legal friends is of no greater value than the testimony they are discussing.

The law must always deal with general rules, and we doubt if our bar will ever consent to any special ruling by which a certain class of opinion testimony shall be governed that is not applicable to all others. The medical profession has been oftenest heard in opposition to the present order of things. From the tone of much that has been written one would conclude that medical opinion testimony was about the only kind that was heard in our courts, when as a matter of fact, it forms but a small part of expert testimony as a whole. The mechanic, merchant, clerk, even the ordinary laborer frequently give testimony that is, in every sense, as expert as that given by the most accomplished chemist or physicist.

The chief objection urged to the present system is that much of the testimony is consciously or unconsciously biased, though a great deal that has been said on this subject is gross exaggeration. In a sense a man upon the witness stand may feel that his opinions are at stake and that they are to be defended, by fair means if he can, but failing that by the best means at hand. This mental attitude, while occasionally seen, we believe to be rare.

One thing, more than another, that has tended to bring medical opinion testimony into discredit as compared with other varieties, is that medicine is not an exact science. The problems that we approach are to be largely measured by judgment and experience, and as long as such is the case, perhaps courts and the general public are justified in looking askance at our claims of infallibility. In proportion as a science can be reduced to mathematical formulæ, can it be considered exact; mechanics, chemistry, physics and astronomy have in part or wholly reached this degree of accuracy. Unfortunately the facts of biology, physiology and medicine depend very much upon the manner in which they are stated, the change of an adjective or even the shifting of accent may so affect verbal definition as to show differences that are more apparent than real. In many of these respects medicine presents exactly the same disabilities as the law. We are all familiar with the way in which trials are conducted: one attorney presents the side of the plaintiff in the worst favorable possible light. Of course,he is not expected to wilfully distort testimony, but it has now and then been charged. Does any one in consequence suggest any radical changes in the manner in which our courts shall try cases? The present attitude of the expert is something analogous to that of the attorney, and it is probable that there is a certain justness and fairness in the present arrangement that could not be otherwise attained. Like the law,medicine is not an exact science, their rules and formulæ are largely influenced by judgment and interpretation. Chloride of sodium and nitrate of silver in solution when mixed will throw down a white flocculent precipitate; the result is constant and invariable. If law and medicine had facts of this character to deal with it would be a simple matter to suggest improvements in both the practice of law and the position of the medical expert.

We venture the prediction that if any of the proposed changes regarding the methods of expert testimony had obtained at the time of its first introduction we should now find a large number clamoring for the introduction of the present system. It is instructive in this connection to read the proceedings of the International Congress of Forensic Medicine held in Paris in 1889. Those taking part in the debate included some of the best criminal lawyers in Paris as well as many physicians eminent in medical jurisprudence. The system in vogue in France is that of a commission to whom are referred all questions calling for medical experts.

Of late this system has become unpopular, because it is believed to operate unduly against the accused. At that meeting several propositions were advanced, and submitted to a vote; one directing that in all cases at least two experts should be employed was carried unaminously, while a second, that they should be appointed by the judge,was carried by a small majority, a large minority voting in favor of each side naming their own expert, substantially the system followed in this country. In view of the conflicting testimony from countries in which the commission plan has been thoroughly tried we certainly ought to approach any contemplated changes in our methods with great care.

Much of the dissatisfaction experienced by physicians with the present manner of giving expert testimony is that they leave the stand feeling that they have not expressed themselves fully on the subject in hand or else they are conscious that their views have been seriously warped by cross-examination. In a great measure this arises from a want of understanding of the common rules of evidence and the rights of a witness. It is not an infrequent observation in our courts to see a witness stumbling along, mixing objective signs, with subjective sensations and statements made to him by the patient, until the whole matter is in such hopeless confusion that it is impossible for the judge to make an intelligent ruling. There is little complaint on the part of those who are able to present facts and theories in a logical and orderly manner and in plain non-technical language, in other words, those who have mastered the art of the medical-jurist. It is difficult to see how this is to be remedied by any change in method, as obscure statements, a mixing of facts with opinions, or hearsay evidence, is sure to be confusing no matter how it is brought into court.

I shall not quote extensively from the literature of the subject, as a mere recounting of the various plans proposed would exceed the limits of my paper. They may, however, be divided into two classes: First, those which invade the province of the jury and practically decide that portion of the case relating to the special facts. Experts are appointed to investigate or listen to testimony and submit a report in writing to guide the court and jury. The second class is much less radical and simply alters the method by which experts shall be summoned. Perhaps the best of these, and one that would involve the least change in our present procedure, would be to have the judge appoint the experts to examine into the facts at issue, or listen to the testimony, and then take the stand in the usual way. This would continue the present system of direct and cross-examination which we believe to be essential to the proper presentation of the views of both prosecution and defense. It would, however, obviate some of the grosser evils of the present system, in which lawyers go out hunting for experts. It is a not infrequent experience to have them walk into the physician's office and give their theory of a case or propound a hypothetical question; if his opinion is unfavorable, the search is continued until favorable results are reached, or they conclude that expert testimony would be of no value in their case. In having the experts selected by the court all this would be done away with. Their compensation should be taxed as part of the costs of the case. Some degree of flexibility could be obtained by varying the number, and the manner in which they were to testify, whether after hearing the testimony, or to hypothetical questions, or to examine into facts. It might also be wise to have a preliminary examination, something like that to which jurors are subjected, touching prejudice, previously formed opinions, knowledge of the case, etc. This would naturally give rise to well founded objections that could be considered by the court. Of course, all of these matters could be gone into on cross-examination, but it would be much better to have it brought out before hand so as to keep expert testimony free from shadows of this character.

One clear objection to the plan proposed relates to experts who may have knowledge of facts, acquired before any legal proceedings have been begun. In many cases a physician has treated or examined a patient long before there is any thought of a law-suit. The opinion of such persons formed at the time may be of more value than subsequent ones, or that of any expert based on a description of the facts. Whether these difficulties can be overcome and a clear distinction made in practice between opinion evidence, previously acquired, or that which is to be obtained during the progress of a trial, is a question for judges and lawyers. If this contingency can be provided for it is certain that the selection of experts by the court presents some decided advantages over our present methods.

From a consideration of all the facts the following conclusions seem to be justified:

1. The present system of expert medical evidence is admittedly faulty.

2. In part this is due to inherent difficulty of the subject.

3. In part to defective understanding of the elementary rules governing the introduction of evidence, by witnesses.

4. In part to the conflicting rulings of courts.

5. Any change, if made, should be done with great caution and only after the most mature deliberation.

6. The present inexact state of medical science does not warrant the invasion of the province of the jury, or the abridgment of cross-examination.

7. The only change at present justified is one altering the manner in which experts are to be summoned.

8. The appointment of official experts is not advisable under our present political system.

(To be concluded.)

Kansas City Academy of Medicine.

Meeting of March 26.

Dr. H. C. Crowell, Gynecologist to All Saints Hospital Kansas City, Mo., read a paper upon

THE BEST METHOD TO FOLLOW IN PERFORMING LAPAROTOMY.

The points to be discussed are those that are not altogether settled—things pertaining to abdominal section concerning which there is a considerable difference of opinion among operators.

Preparation.—The item of first consideration, when time allows, is *preparation*. The patient is usually cleaned out by a free purge of sulphate of magnesia, compound licorice powder or other evacuant, for two days prior to operation. Question: Is there any preference as to agent employed? Do any of the various remedies usually employed predispose to the formation of gas in the alimentary tract, and thus give rise to distress after operation?

The abdomen is shaved and washed the evening previous to operation, the skin is then rubbed with turpentine, washed with bichloride solution (1–2,000), and covered with towels wrung out of bichloride solution; these are left on until the patient is put upon the operating table. Question: Is any advantage derived from this procedure? It is done to destroy or check development of germs. Kelly says it will do so for twenty-four hours—or until after operation.

Anæsthetic.—What anæsthetic shall be used? Ether is generally employed in the East, but here chloroform is almost exclusively administered in laparotomies, as well as all other operations; it appears to be safe, and certainly causes less vomiting, and possibly less shock. Question: Is not chloroform, in abdominal surgery, equally as safe as ether if properly given?

Protection of Field of Operation.—Upon the abdomen and about the incision are spread towels wrung out of hot bichloride solution. Question: Would it not be better to employ dry antiseptic towels or gauze? The wet towels cool in a short time, and can but chill the surface where applied, and thus favor shock.

The Incision.—The incision is made by a free and deep cut—down to the peritoneum at one stroke, if possible. We have been taught to go through the median line. Question: Should the cut be through the linea alba, or would it be better, and form a stronger barrier against future hernial protrusions, if made through one of the recti muscles? In making the cut, most operators separate the muscles with the fingers and handle of the scalpel; this is less bloody than a free, clean cut with the blade of the knife, since it does not give as good results. In only one case observed thus far has a hernia occurred when the incision was made in the rectus; this was in a patient 64 years of age (operation for intestinal obstruction), where the sutures were run "through and through," including peritoneum, vessels, fascia, adipose tissue and skin in each stitch. Here the hernia was probably due to extreme age, with consequent lack of reparative energy.

Irrigation and Drainage.—In cases where extensive adhesions have been severed, or there has been an escape of the contents of a cyst or abscess, douches of hot water should be employed to prevent central oozing or thoroughly cleanse the peritoneal cavity. The water may be poured from a pitcher in the absence of the gravity douche, which is more effective in reaching the recesses of the pelvis. After douching, the cavity is sponged out, to remove clots or débris, and to ascertain if there be oozing. Question: Should all cases thus treated require a drainage tube? We have heretofore been in the habit of closing without drainage if there were little hæmorrhage or septic matter, but eminent authority, as the Prices, Cushing, Sänger and others, assures us that our patients will pursue a more even and satisfactory course if a drainage tube be inserted in every case where adhesions have been severed. It is questionable if the drainage tube is of any service in the removal of purulent material. So far as drainage for serum is concerned, if we have introduced no septic germs, there will be no decomposition of the serum, and the peritoneum can absorb all and more than we may expect to be exuded. Everything conduces to a free absorption, as the patient takes nothing to fill the blood-vessels or lacteals for thirty-six hours or more.

Ligature for Pedicle.—Ligature of the pedicle is done with floss silk, which is to be regarded as superior to braided silk. It is very strong, and so can be tied tightly. Some discussion may arise as to the superiority of silk to catgut. It is claimed as an argument against silk that it is non-absorbable, and may cause trouble; it is also said that catgut accomplishes all that is desired, is readily absorbed, and thus is less likely to cause trouble. It is to be feared, however, because it may possibly be too rapidly absorbed, and give a hæmorrhage when least expected.

Closure of Wound.—For closing the wound, a continuous suture of fine catgut is to be preferred for sewing the peritoneum, followed by a number of interrupted sutures of silkworm gut passing through the skin, adipose tissue, fascia and muscles and picking up the raphe made in sewing the peritoneum, and coming out on the opposite side; these sutures are then laid back on each side and the fascia closed with catgut sutures, after which the first sutures are tied. Question: Is this method of sewing in three layers, bringing into perfect and certain approximation the several layers, any stronger or safer against subsequent hernial protrusions than the including of all the tissues in one circular suture? It certainly takes much longer, and despatch is an element of success to be appreciated and cultivated. Some of the best operators use this quick method of closure, and claim perfectly satisfactory results.

Dressing.—The after dressing consists of dusting with subiodide of bismuth, and the application of bichloride gauze, cotton and adhesive strips to hold in place. But by this dressing, the lower part of the wound is but poorly protected; to alleviate this, one may apply an iodoform collodion dressing with the most gratifying results; this will also do much to prevent stitch abscesses.

After Treatment.—After the patient is put to bed she gets nothing but teaspoonful doses of hot water, with enemas of beef juice, salt, milk and whiskey, if there has been much loss of blood. Small doses of nux vomica should be given early (on the first day usually) as a heart stimulant as well as for its action in promoting peristalsis. Morphine has no place in abdominal surgery unless the patient suffers unusual pain; restlessness can usually be controlled by sulfonal.

Hot vaginal douches are also of service for the relief of

pain. For vomiting calomel and soda may be given, even as early as the first day. A saline cathartic should be given on the second day, followed in about four hours by an enema containing sulphate of magnesia, glycerine and a little turpentine. The patient need not be kept on the back, but allowed to turn from side to side, gently. Cramps in the limbs may be overcome by bandaging from below upward with flannel. The diet is kept low for five or six days, and a Seidlitz powder is given nearly every morning to maintain active peristalsis. After getting up the patient is instructed to wear an abdominal supporter for at least one year; but within the past year, Watkins, of Chicago, has advocated the non-use of such supporters on the ground that it serves to restrict muscular action with consequent atrophy and increased liability to hernia. Question: Should or should not an abdominal supporter be ordered after abdominal section?

Dr. J. F. Binnie: On the whole, I think it is best to prepare patients for laparotomy in the same way as for operations about the rectum. I like to give a five grain blue pill thirty-six hours, and a dose of Hunyadi water or other saline twenty-four hours before the operation, while an enema is given just before the patient goes upon the table. If the diet has been regulated properly, such a course puts the intestines in the best possible order for our purposes. In abdominal surgery chloroform is, on the whole, preferable to ether, as with the former respiration is quieter and there is less coughing, while the parts are not apt to be so engorged as when ether is given. In opening the abdominal cavity it is a matter of indifference to me whether I go through the linea alba or not; very possibly hernia would be of less frequent occurrence if we always went through the rectus. Dr. Crowell discusses the question of drainage after flushing the peritoneum; as I would only make use of flushing when I feared pus, colloid material or some other uncleanness had escaped into the cavity, I certainly use drainage whenever I irrigate. In ligating the adhesions and pedicles in most cases, at least, good juniper-alcohol cat-gut answers most admirably; from its use I have never seen any ill effects. As time passes I use silk less and less. I practically never use silk to ligate a vessel in the surgery of other regions, and fail to see why, if it be safe when applied to the femoral artery, it should not be safe on an ovarian pedicle. The convenience of catgut for sutures is self-evident, and I use it almost to the exclusion of everything else. As a dressing I use an iodine containing powder, and sublimate gauze. If everything goes well I substitute for this at the first dressing, a thin layer of cotton and collodion. In small wounds I apply the collodion at the conclusion of the operation and find that it acts well, but where the wound is large I feel safer if, for the first two or three days, the dressing applied is one capable of absorbing and keeping pure any little blood or serum which may exude.

Dr. T. J. Beattie: Dr. Crowell's method of management corresponds closely to my own in most particulars, but I question whether it is best to purge the patient so thoroughly for thirty-six hours, as this and the light diet usually enjoined will render most women too weak; I am satisfied if the patient's bowels move freely just before operation. And I feed heavily up to within twelve hours of the operation, then administering the saline cathartic. As an anæsthetic I have always used chloroform and with unqualified satisfaction; I do not believe it is, in the hands of a careful man, any more dangerous than ether, and it has no bad after effects like ether. For closing the wound I prefer one set of stitches. With the pedicle, silk floss has always answered admirably; the braided is hard and not so easily sterilized and encysted. I have had one case of suppuration of the pedicle where braided silk was used; my patient developed fever though the external wound had healed by primary union; upon opening up the pelvic cavity at least a pint of pus was discharged from the abscess in the pedicles; free drainage was established and the patient made a good, though slow recovery.

Dr. S. T. Gant: How long after the operation did the symptoms of pus-formation make their appearance?

Dr. Beatty: The fever began about the fifth or sixth day.

Dr. Gant: It may may be asked why I, a "rectologist," should participate in a discussion by gynecologists; but the intimacy between rectal and genital diseases needs no explanation, and besides in a long experience as house-surgeon at the New York Post-Graduate Hospital, I had a very valuable experience in abdominal work. My observation teaches me that it is of prime importance to clean out the bowels thoroughly, and for this purpose I believe compound licorice powder acts best; it may be followed by a Seidlitz powder. As for the anæsthetic, in the New York hospital I had to administer ether from five to a dozen times a day, while Dr. Nillson was the only operator who preferred chloroform. I have become greatly prejudiced against ether because of the kidney trouble severe vomiting and other bad effects and I am glad to see chloroform almost universally employed in the West and South. As to the incision, to go through the rectus muscle is certainly the correct thing from a physiological standpoint. I should be afraid that catgut would loosen sufficiently to cause bleeding from the pedicle; silk certainly will not give way and it cannot give rise to trouble if it be absolutely sterile when introduced. Union by first intention is sometimes not obtained; in such a case two strips of surgeon's plaster may be stuck parallel to the margin of the wounds and joined together by threads passed across; the surface of the wound can be repeatedly washed and swabbed out with balsam of Peru to cause rapid granulation, antiseptic dressing being placed over it as usual; no pus should form.

Dr. Emory Lanphear: Briefly stated my method of operating is as follows: The patient is placed in hospital a few days before operation that she may become familiar with nurse and room, and that I may examine the urine, etc., except in cases requiring immediate operation. On the day before the operation the bowels are thoroughly evacuated with sulphate of magnesia, a vaginal douche of hot boric acid solution given and the abdomen carefully shaved and scrubbed with soap and water. A pad of moist bichloride gauze—1 to 2,000—is pinned on the abdomen and pubes. At 7:30 the next morning the rectum is irrigated as well as the vagina, the urine drawn and at 8 A.M., or as soon thereafter as possible, the patient is anæsthetized with chloroform unless ether is specially indicated; operations made early in the day have given me less trouble than those made after noon. When complete unconsciousness is obtained, the dressings are removed and the abdomen once more scrubbed with soap and water, dried, washed with ether, dried and finally washed with bi-chloride solution, 1 to 1,000. If the operating room be such that a temperature of 98° F. can be maintained towels wrung out of hot bichloride solutions are placed around the field of operation; but if the room be chilly or likely to become so, dry towels are employed instead, pinned into place at the corners. A clean cut is made through the rectus muscle as I believe that the line of healing will be more firm than if the cut be made in the non-vascular linea alba. All bleeding is arrested by artery forceps, the peritoneum caught up with catch-forceps and nicked, blunt-pointed scissors introduced and the opening enlarged to the required extent. As to the pedicle: I am now using a large cat-gut ligature, as I have seen a number of very bad results, including a fearful case of fæcal fistula, abscess, etc., following the use of silk; if properly tied I do not think there is any more danger with a catgut than with a silk or hemp ligature and it is so easily rendered aseptic and so quickly absorbed as to be the ideal substance for such work. As to the question of drainage: in simple ovariotomy none is necessary. If there have been extensive adhesions and much hæmorrhage, if there have been purulent accumulations with contamination of the peritoneum or if there has been any other necessity for irrigating I insert a drainage-tube of glass, or pack with iodoform gauze: but whenever possible drainage is to be avoided and in most cases it can be if sufficient care be exercised; I have noticed that my cases without drainage have done much better than those with, but this may possibly be due to the fact that I have only been compelled to use drainage in my worst cases. In closing the abdominal wound, if time permits I sew up the peritoneum with a fine, continuous, cat-gut suture, dust in some aristol or iodoform and then put in heavy catgut sutures through skin, fat, fascia and muscles down to, but not through, the peritoneum. In my last eight cases I have used silk but once in closing the abdominal wound. Iodoform is then dusted freely on, several pieces of bichloride gauze, "fluffed up," applied over the abdomen, a thin layer of cotton and the whole fastened by strips of surgeon's plaster, occasionally a T bandage. In experimental work on dogs I have always used the collodion dressing no matter how large the cut, and with the greatest satisfaction, but I have never tried it in the human subject. The patient is allowed to be up after the tenth day but wears a bandage around the abdomen until the fifteenth or twentieth day. The bowels are moved on the third day with salines; no morphine is given if possible. This, I believe, covers my mode of conducting an abdominal section so far as the questions raised in the paper are concerned.

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SATURDAY, APRIL 16, 1892.

MILK FROM TUBERCULOUS COWS.

Anything from the pen of DR. E. F. BRUSH relating to the subject of tuberculous cattle is read with interest and profit. In the initial number of the *Practitioner's Monthly*, March, 1892, he discusses the question, "When does the milk of a tuberculous cow become dangerous as an article of food?"

According to DR. BRUSH, chronic tuberculosis is much more common in cattle than is generally thought, but the acute variety is admittedly rare. The existence of long-continued tuberculosis in the cow, without detriment to the general health of the animal, and without the supervention of septicæmia, is ingeniously explained in this way: The normal temperature of the healthy cow is 102.5°, about the same as the average temperature resulting from tuberculosis in man. This temperature frequently is not increased in the cow by the presence of chronic tuberculous disease. The animal, therefore, is not called upon to suffer the effects of long-continued elevation of temperature, and is consequently saved the strain which long-continued fever produces. Its tissues are not weakened, its resisting powers are not diminished, the tubercles do not break down. "Therefore, in order that a cow may develop the tuberculosis that kills, some other morbid agency (traumatism, puerperal septicæmia, etc.) must supervene, to set up the breaking-down process in the tubercle."

When acute miliary tuberculosis occurs in a cow, the milk secretion very soon ceases, so that actual danger to milk from this source is very slight. On the other hand, chronic tuberculosis is so widely distributed among dairy cattle, that probably no milk that reaches cities is free from admixture with milk from tuberculous animals. This does not imply, however, that it contains the bacillus of tuberculosis. It has been well established that much of the milk from tuberculous cows is free from this germ, while in the milk from other tuberculous cows, even some free from tuberculosis of the udder, the bacillus tuberculosis has been found. Nevertheless, as DR. BRUSH suggests, the question should be made to read, "When is the human subject fit to take milk from tuberculous cows, with impunity?" The difficulties in the way of a satisfactory answer to such a question are apparent. Fortunately, the great majority of people are not susceptible to tuberculosis. But the great number of cases of abdominal tuberculosis in children is a fair indication that the food is an important element in the propagation of the disease. It may be, in general, admitted that individuals who are susceptible to tuberculosis, either because of heredity or of the existence of conditions which have lowered the general strength, or, in the language of the older writers, "impaired the constitution," are hardly fit subjects for the use of milk from tuberculous cows.

DR. BRUSH pleads for a wider general knowledge of cows on the part of the profession, and for education of the laity on the subject, so that the propagating of cattle from non-tuberculous parents may be more generally employed. Believing as he does, that human tuberculosis is maintained by the domestic cattle in our midst, he sees as the only solution of the question, the stamping out of tuberculosis in cattle by proper breeding.

CASTRATION RECOMMENDED AS A SUBSTITUTE FOR CAPITAL PUNISHMENT.

DR. W. A. HAMMOND has addressed the New York Society of Medical Jurisprudence, at its last regular meeting, on the advantages of castration as a punishment for murder. As reported in the *Medical News*, April 2, DR. HAMMOND restricts the scope of his suggestion to the male sex. "Women have become so accustomed to the removal of the ovaries, and these organs are so much less essential to womanhood than the testicles are to manhood, that it might be necessary to substitute imprisonment for life in their case." Female murderers are far less numerous than the males, so that this consideration is not of great moment.

DR. HAMMOND seems to be serious in the matter, but he is not sanguine that the measure will be adopted in the lifetime of any of his hearers. For as it took many hundreds of years to abolish torture, and other inhumanities on the part of temporal and ecclesiastical powers, so it may take a long agitation before modern society can consent to his amendment. It is evident that neither capital punishment nor life-imprisonment have that amount of deterrent influence over the criminal class that could be desired, and DR. HAMMOND argues that castration would be more effective than either of the older methods. He quotes a French writer who has said that the dignity of a man resides in his testicles, and also the three negroes, castrated in Missouri as a punishment for rape,

that capital punishment would have been their preference. Many a criminal has told DR. HAMMOND, he says, that they would rather hang than lose the organs in question. Juries would feel less squeamish about decreeing guilt, in cases of doubtful testimony, if life-taking were not one of the consequences of finding a man guilty. The punishment would be continuous, and not momentary and intense, and in the continuance of a punitive award will be found its greatest effect. Castration changes the whole relations of the man; and while the brand upon him would be as bad as, or worse than, the mark upon Cain, he would be removed from many criminal tendencies. He cannot open his mouth without exposing what has happened to him; his facial expression becomes altered; he becomes effeminate and cowardly. He loses his appetite for alcoholic drink. In the case of a man who mutilated himself while delirious from alcohol, this act was the means of his reformation.

Criminals thus changed might in many instances, be made useful to society—much more so than dead men, even if it be the law that slays them. They could be made members of church-choirs, the vocal qualifications of eunuchs are well-known—safe typewriters, dry-nurses, laundry men, policemen, sailors, soldiers, legislators, reporters for mild society newspapers, and other places where originality and "dash" are not requisite.

The brutality of animal nature is reduced by emasculation, DR. HAMMOND continues to argue. The fierce ram becomes mild, and the night-roving tom-cat ceases his pugnacious raids. The eunuchs of the Orient are described by travelers as a mild and obedient type of persons, generally trustworthy and fond of the care of young children.

As a means of stopping the propagation of criminals, this form of punishment would be no less effective than hanging. If it had been employed for the last few hundred years the number of criminal acts would have been many thousands less by this time, and the administration of justice would now have become much simpler and less expensive.

In the discussion following the paper, it was stated that more proof is needed to show that castrated males are not liable to commit acts of violence, and even murder. Many crimes are reported as having been perpetrated in the harems of the Orient, and it cannot always be shown that the eunuchs are guiltless. They have a not very enviable reputation in the matter of low cunning, conspiracy and greed, with their usual concomitant traits. DR. HAMMOND has limited his present study or discourse to the crime of murder, incidentally referring to the minor blemishes of rape, wife-beating, alcoholism and suicidal proclivities. There is a class of despicable male creatures, in our cities, who prey upon and deprave women, and afterwards beat them, for whom this punitive measure would be admirably adapted to begin experiments with. If it worked well with them, it might be carried upwards into higher walks of vice.

THE TREATMENT OF DISEASE BY LEGISLATORS.

A resolution has been introduced in the Senate, authorizing the President to appoint a commission of three persons, two of whom shall be physicians, whose duty it shall be to select a site for the establishment of a national sanitarium for the treatment of pulmonary diseases. This sanitarium must be located in one of the Territories of the United States, and upon unoccupied public lands, and the commission is to report within six months after its appointment.

The spirit which dictated the resolution is to be commended, the intentions are evidently good but sadly misdirected.

While the medical profession is working hard to determine the best climatic conditions for the various phases of pulmonary tuberculosis, and finds itself almost appalled at the magnitude of the task, a worthy legislator proposes to cut the Gordian knot and have two physicians settle the matter, and settle it in six months. From the compensation allowed, ten dollars a day, while actually employed in the work, it is hardly possible that the President will be able to obtain the services of very eminent men.

However, the commission would be assisted very materially by the resolution itself. They need not consider at all the conflicting claims of Southern California and Colorado, or the various advantages of the Adirondacks, Asheville, or Florida, because the sanitarium must be located in one of the Territories. They have no need to study the influence of sea air upon pulmonary disease, because none of the Territories touch the ocean. Thus many of the most difficult phases of the question which the profession at large has met with have been settled by legislation.

We do not wish to be captious with regard to this innocent resolution, from which at least no harm can come, but merely to use it to illustrate how necessarily shallow all professional propositions must be which have their origin outside the profession. True of all professions, it is particularly so of medicine.

That there must be sanitary legislation goes without saying, but it should have its origin in the medical profession, and if the Government had an official sanitary department which could be looked to for assistance in such matters, such absurd legislation as this resolution would not disgrace our records. How ridiculous it would be for a convention of physicians to attempt legislation to meet the needs of the legal profession is apparent to every lawyer, but it is to be feared that the average legal legislator is not fully aware of the equal force of the converse proposition.

This instance is but another indication of the necessity for the appointment of a National Secretary of Health, with a seat in the President's cabinet.

AMERICAN MEDICAL ASSOCIATION.—HOTELS FOR THE DETROIT MEETING.

The following are the hotels and their rates for delegates to the meeting of the American Medical Association:

Russell House, $3 per day and upward.
Hotel Cadillac, $3 per day and upward.
Hotel Normandie, $2 and $2.50 per day.
Wayne Hotel, $2 and $3.50 per day.
Griswold House, $2 per day.
Hotel Tacoma, $1.50 per day.
Griffin House, $2 per day.
Cass Avenue Hotel, $1.50 per day.
Hotel Renand, $1.50 per day.
Queen Elizabeth Hotel, $1.50 per day.
Rice's Hotel, $1.25 per day.
Hotel Goodman, $1 per day.

The local Committee on Hotels, etc., will also be glad to furnish members with the addresses of good boarding houses. For any further information address W. G. Henry, M.D., Chairman Committee on Hotels, etc., 68 Lafayette Avenue, Detroit, Mich.

THE following decision by the Supreme Court of Illinois in the case of The North Chicago Street Railway Co. vs. James W. Cotton, is of interest:

EVIDENCE.—*To show payment and reasonableness of physician's bill.*—Where the plaintiff in an action to recover damages for a personal injury, alleges that he was compelled to, and did pay out and expend large sums of money in and about being cured of his injuries, it will not be sufficient for him to prove merely that he has paid a certain physician's bill in order to its recovery, but he must also show that by reason of his injuries he has necessarily incurred such bill and that it is reasonable.

DAMAGES.—*Right to recover for medical services.*—In such case the court, on specific objection, may, before admitting proof of the plaintiff's liability incurred in curing himself and its amount and reasonableness, require an assurance from counsel that he will follow up the evidence by proof of payment. On failure to prove that such a bill has been paid, defendant should move to exclude all evidence in relation to the physician's bill, or ask the court to instruct the jury to disregard it.

PHYSICIAN.—*Proof of his license—Right to receive payment for services.*—Where the question of a physician's qualifications and right to practice in his profession arises only collaterally, proof that he has practiced medicine in the State for a long time will show *prima facie* that he was lawfully entitled to practice. But if he were to sue to recover for professional services, he would doubtless have to show affirmatively his compliance with the law regulating the practice of medicine.

SELECTIONS.

SOMÉ RECENT VIEWS ON LUPUS.—While the consensus of opinion is almost unanimous in favor of the tuberculous nature of lupus, there still remain many standpoints from which medical thinkers look upon the disease, and it is always interesting, and often profitable, to note their views.

In a discussion of lupus which took place at the annual meeting of the British Medical Association, Dr. Payne draws attention to certain points which still admit of controversy.

Lupus has occasionally been attributed to traumatism, but in such instances there must either have been something abnormal in the tissues of the patient, or some specific infection is introduced into the wound. Everything points to a specific irritant, and the structure of the growth warrants the same conclusion. The history of the disease, both clinical and pathological, the speaker thought, would show that there must be a persistent, and therefore a living, irritant which keeps up the granulation growth.

No point has been more debated than that of the relationship which lupus bears to tuberculous or scrofulous disease in the same subject. In the experience of Dr Payne, while the majority of lupus patients are healthy in other respects, about one in four present some other manifestation of tubercle, such as joint disease, phthisis, or scrofulous glands.

Although this proportion is much larger than that given by most observers, it does not have such a great bearing on the question after all, for we can conceive it quite possible for one organ or region of the body to be effected and other organs escape. In regard to family history, the speaker goes on to say that he has found an even greater proportion of tuberculous affections, and finds that they are indeed more frequent in the parents or relatives than in the patients themselves. If this personal experience can be established as a general principle, it would lead to the suggestion that lupus is often a manifestation of hereditary tuberculosis. In this connection it is interesting to note Baumgarten's recently advanced view, that the bacillus may be directly inherited, like the virus of syphilis, from one or the other parent. Drysdale believes that this theory is tenable for a certain number of cases of lupus, while several gentlemen who took part in the discussion of Dr. Payne's paper, including T. Calcott Fox, agreed that a family history of tuberculosis was especially frequent in lupus cases.

It is generally stated, however, that lupus itself never occurs in two successive generations; but this is evidently an erroneous statement, for the author has himself seen it in parent and offspring. Another instance, where instead of "never" one should substitute "hardly ever," is in Mr. Hutchinson's statement that lupus never gives rise to infective gland disease, since Leloir has found that adenopathies frequently occupy the lymphatic structures leading from the lupus, and Fox states that lupus can undoubtedly secondarily infect the related glands and lymphatics, and, after long years, the viscera.

That infection may take place in the opposite direction would also appear probable from the author's experience as well as that of Radcliffe Crocker, though the bacillary growth of scrofulous glands usually dies off when it reaches the surface, and only exceptionally extends along the skin in the clinical form of lupus. The experience of a number of gentlemen present was to the effect that the association of lupus with other tuberculous lesions was not the rarity which it was usually believed to be, but was on the contrary not infrequent. Fox has shown by the statistics of eighty hospital cases of true lupus, that scrofulous or tuberculous lesions of the skin, bones, glands, or joints were frequent complications.

Lupus differs from other forms of tuberculous disease in its slow and chronic process, its feeble infectivity, and the paucity of bacilli usually found; and the author attributes these characteristics, in a measure at least, to the comparatively low temperature of the skin, which offers an unfavorable condition for the development of the bacilli, being about twenty degrees lower than that presented by internal organs. The author sees no reason for making any broad distinction between lupus and inoculated traumatic tuberculosis; while Pye-Smith still believes in such a distinction, though admitting the same bacillary origin for both. Fox points to the failure of attempts to reproduce lupus as a weak spot in the argument, but it must be borne in mind that Mr. Eve has by inoculation of lupus tissue in a rabbit's

ear produced what was apparently a true lupus differing from inoculated tubercle. It will thus be seen that, while more is known about the nature of lupus than formerly, there are many points on which observers still differ; but as more attention is being paid at the present time to tuberculous diseases in general than probably ever before, it is more than likely that some of these at least will soon be definitely settled.—*Medical Record.*

A doctor in Bootle, England, has the following printed on his prescription blanks: Gratefulness of the patient is part of his disease, is most prominent when the fever is highest, lessens during convalesence, and disappears as health is re-established. Hence, prescriptions only for cash.—*Memphis Medical Monthly.*

Diagnosis of Bladder Tumors.—Dr. Guiard points out some features of hæmaturia which may aid in establishing the diagnosis without digital examination or exploratory incision. Prostatic tumors are scarcely ever accompanied by hæmaturia; renal tumors very generally are. Renal hæmorrhage is quite often only of short duration, small in amount, and recurs at long intervals. At times there is an alternation of clear and bloody urine in the same day, a condition never seen in hæmorrhage due to tumors in the bladder. Renal hæmorrhage gradually diminishes and finally disappears. The opposite is seen in bladder tumors. In washing out the bladder if the last drops consist of pure bright blood, it speaks for tumor of the bladder. Elongated clots, rarely found, are probably formed in the ureter, especially if pains like renal colic have preceded their discovery. Small blood cylinders may be casts of the efferent kidney tubes. Hypogastric palpation alone usually shows nothing, but after the bladder has been emptied Guyon's method of *ballottement* shows the smallest increase in the size of the bladder. By pressing the anterior hand deeply with successive aspirations, the extent and thickness of a bladder tumor can be appreciated.—*Archives Générale de Médecine.*

The Work-Variation of a Child's Hour of Study.—The investigation of this question, the results of which are published by Dr. Burgerstein, of Vienna, in a paper originally submitted to the Section on Infancy, Childhood and School Life, at the International Congress of Hygiene at London, in August last, was undertaken by him to determine the time during which a pupil should be kept at work continuously in one line of mental work. For this purpose two classes of girls and two classes of boys were selected; in all 162 children of from eleven to thirteen years of age. These children were kept at work upon simple mathematical problems (addition and multiplication) for one hour, the hour being divided into four periods of ten minutes each, with five-minute intervals of rest.

During the whole period these 162 pupils worked out 135,019 figures, making 6,504 mistakes. It was found that the total number of calculations made by all the children increased, roughly speaking, 4,000, 3,000 and 4,000 in the different periods. During the third period of work, the increase of work done was not so great as during the other periods. The number of mistakes also increased 450,700 and 350 in the different periods. Here again, during the third period, the quality of the work was at its lowest. From this experiment it would appear that children of the ages stated become fatigued in three-quarters of an hour; that the power of work gradually diminishes to a certain point during the third quarter of the hour, returning with renewed force in the fourth quarter. The author concludes that continuous work for children of these ages, even though the tasks are not difficult, should not last longer than three-quarters of an hour.

Secretary of Public Health.—Repeated efforts have been made in past years to organize a Department of Public Health in the National Government, and place it on the same footing as the other departments, with its chief or secretary, who would be a member of the President's Cabinet. The American Medical Association has taken the matter in hand and has sent broadcast throughout the land a petition to Congress which it asks the profession to endorse, and exert itself to have granted. Among the many advantages which would accrue from the establishment of such a department, the committee of the association believes that its secretary would "become one to whom we could look for the exploitation of measures that will direct continuous scientific and collective investigation in regard to endemic, contagious, and other diseases; the enlightenment of the people in sanitary ways of living; the dissemination of information respecting the most favorable places of residence for those afflicted with such chronic diseases as asthma, rheumatism, neuralgia, and consumption; the examination of food and drinks; medicinal springs; the collection and tabulation of vital statistics at large and in various localities, such as the congested areas of our great cities and among various races. He would be able to coöperate with State Boards of Health, the Signal Service, the medical departments of the army, navy, and marine service, unify and utilize their work, and thus make the Department of Public Health the repository of the most important facts that concern the comfort of the people; and his duties will grow broader and stronger in adaptability to public needs."

The measure is one which will doubtless receive the cordial endorsement of every medical man in the country. Much may be accomplished by the individual efforts of physicians in commending the subject to Congressmen and Senators with whom they may be acquainted or come in contact.—*Brooklyn Medical Journal.*

On the Lying-in Decubitis.—The dorsal position so constantly observed for several days after labor I hold to be a mistake, for the following reasons:—

First, the soft and enlarged uterus (more especially when compressed by a tight binder drawn by all the force available of either nurse or doctor) must gravitate backwards and so favor the retention of the secretions instead of getting rid of them.

Secondly, in any case where a breach of surface exists (and which must have taken place unobserved during the process of labor) the dorsal position, by retaining the discharges longer in contact with the most likely surfaces to be torn, viz., cervix uteri or perineum, may lead to septic absorption, and it is as well to bear this in mind before waiting for such symptoms to develop. And by changing the decubitus on the back (so often assumed by the patient herself, or advised by the nurse) to the lateral or preferably the semi-prone position, the secretions will be much more likely to leave the body more quickly, and thus not be liable to be absorbed by any torn surface, perineum, etc., which may chance to exist. It is often a matter for surprise to observe the quantity of fluid held by the vagina (after syringing, for instance, when lying down). And when such fluid is of an abnormal character how important it is for the attendant to favor its exit by every means in his power. Another disadvantage of the dorsal position is that a quantity of lochial discharge collects in utero, and is liable to find its way into the patulous openings of the Fallopian tubes. The semi-recumbent position on the hip I have found useful, or the sitting posture for a few moments when the first twenty-four hours have passed, and I have remarked when this is done the process of involution proceeds more rapidly, the peristaltic action of the bowels becomes sooner reëstab-

lished, and the lochial discharge ceases at an earlier date. I consider that if every lying-in patient were to adopt the prone position *directly after the birth of the child*, the expulsion of the placenta would be hastened, and very probably its expression by hand seldom required. This would be in itself, in my opinion, a great advantage if we consider the squeezing and violent pressure backwards the uterus has to sustain during the process of "expression," frequently followed by the application of a tight binder. Is it any wonder then that retroversion of the uterus has been traced (in some cases at least) to the aforesaid practice, combined with the mischievous habit of enforcing the dorsal position in addition on the lying-in patient for weeks after delivery, with the plausible idea of assisting the process of involution and preserving the patient's figure, when it was far more likely to produce an opposite effect. By changing the position each day as I suggest, more perfect drainage of the parturient canal will be effected, and the uterus return to its normal size and position more rapidly. I trust, therefore, that a trial will be made of my suggestions by obstetricians if only for the reasons given.—*Medical Press.*

Hare (H.A.) on the Treatment of Anæmia by Copper and Arsenic.—After the digestive tube has been treated by the remedies ordinarily used to regulate its action, the arsenite of copper has an opportunity to perform a double duty. Acting as does arsenic as a stimulant to mucous membranes all over the body, in addition to its stimulant influence on nutrition, it tends to prevent disorders of the digestive mucous membrane, and so renders perfect secretion and absorption possible, preventing the auto-intoxication of the patient from the fermentation and decomposition changes in the contents of the stomach and bowel. Happily joined to this, the copper adds tone to the system, and promotes assimilation and the production of muscular tissue.

Acting in the belief that arsenite of copper would form a useful combination in the treatment of anæmia and debility, the writer has tried it in a number of cases with very encouraging results. Under these circumstances the digestion improves, the color becomes more like the normal, and, either by a direct effect on nutrition or on digestion or on both, the patients progressed rapidly towards health, provided, of course, that the anæmia was functional and not organic in origin. In the dose of one-fiftieth, or one-twenty-fifth of a grain, arsenite of copper will, I think, often prove of service, if given three times a day after meals, and from its combination may prove to be superior to Fowler's solution not only in anæmia but also in chorea and similar nervous ailments.—*Therapeutic Gazette.*

Infection and Immunity.—Dr. A. C. Abbott in *The Practitioner* says:

Of the hypotheses that exist for the explanation of immunity, that which assumes acquired immunity to be due to reactive changes on the part of the tissues has received the greatest support.

Immunity is most frequently seen to follow the introduction into the body of the products of growth of bacteria that in some way or other have been modified. This modification may be artificially produced from the products of virulent organisms and then introduced into the tissues of the animal; or the organisms themselves may be so treated that they are no longer virulent, so that when introduced into the body of the animal they eliminate poisons of a much less vigorous nature than is the case when they possess their full virulence.

Immunity following the introduction of bacterial products into the tissues is not the result of the permanent presence of these substances *per se* in the tissues, or to a tolerance acquired by the tissues to the poison, but is probably due to the formation in the tissues of another body that acts as an antidote to the poisonous substance.

This protective proteid that is eliminated by the cells of the tissues need not of necessity be antagonistic to the life of the organisms themselves, but in some cases must be looked upon more as an antidote to their poisonous products.

In the serum of the normal circulating blood of many animals there exists a body that is capable, outside of the body, of rendering inert bacteria that, if introduced into the body of the animal, would prove infective.

In many instances infection may be looked upon as a contest between the bacteria and the tissues, carried on on the part of the former by the aid of the poisonous products of their growth, and resisted by the latter through the agency of the proteid bodies normally present in their integral cells.

When infection occurs it may be explained either by the excess of vigor of the bacterial products over the antidotal or protective proteids eliminated by the tissues, or to some cause that has interfered with the normal activity and production of these bodies by the tissues.

Phagocytosis, though frequently seen, is not essential to the existence of immunity, but is more probably a secondary process; the bacteria being taken up by the leucocytes only after having been rendered inert through the normal germicidal activity of the serum of the blood and other fluids of the body.

Diagnosis of Pregnancy in Early Months.—Dr. Chas. Jewett (*Brooklyn Medical Journal*) says:

The diagnosis of pregnancy in the early months rests upon no one sign, but upon the collective evidence of all the signs.

The most reliable evidence of normal gestation in the first three months is to be found in the changes which take place in the uterine tumor.

In the great majority of all cases of normal pregnancy the signs of the second month are sufficient to establish the diagnosis.

In the absence of pelvic diseases, pregnancy may be positively predicted in every case of utero-gestation between the eighth and the twelfth week, often at an earlier period.

A ruptured tubal pregnancy, with slight hæmorrhage, may pass unrecognized, usually being followed by recovery.

In ruptured tubal pregnancy, with free hæmorrhage, the clinical picture is unmistakable.

While the diagnosis is more difficult in ectopic than in normal pregnancy, it is possible in a large percentage of cases.

Three Signs of Pregnancy.—Dr. A. J. C. Skene (*Brooklyn Medical Journal*) says:

First, in addition to the elasticity or softening of the uterus and its change of form, there comes with that a difficulty of mapping out the uterus. It is exceedingly difficult to outline it in some cases, and that very fact is of great value, because anything else which is likely to simulate pregnancy is more clearly defined because denser, as a uterine fibroid, subinvolution, a distended Fallopian tube or an ovarian cyst, for instance. More than that, in the early months of pregnancy the uterus grows out of proportion to its surroundings, and so its mobility, or the facility with which it can be displaced, is lessened. You will find it is more difficult to raise a pregnant uterus up out of the pelvis or toward the superior strait than in any other condition—than in cases of most, not all, small fibroids which enlarge the uterus, or subinvolution, which does the same thing. This partial fixation is rapidly overcome in the latter months of

pregnancy, especially after the third month, when the function of development of the uterine ligaments is taken up and goes on rapidly.

The second sign which I would mention is the color of the mucous membrane of pregnancy, which is different from everything else—nothing simulates it. It is present in a less degree in ectopic gestation, but in normal gestation this color of the mucous membrane is not simulated by any marked condition that I know of. That peculiar bluish-violet hue, if seen a few times, is easily recognized afterwards, and becomes of the greatest possible value, and I depend very largely upon it. Of course it requires a careful speculum examination in order to see it, but it is worth the trouble in doubtful cases.

The third sign is the peculiar secretion in the cervix. There is a difference between the secretion in the cervix of the pregnant uterus and that of any other pathological condition. In the pregnant uterus the cervical secretion has a whitish, opaque appearance, that at first sight is very much like the leucorrhœal discharge in a case of muco-purulent cervical endometritis, but careful examination proves that it is not, because it contains pus, which gives the opaque appearance, while in pregnancy opacity is due to the coagulation of the albumen by the secretions of the vagina. That is characteristic of pregnancy, and occurs in no pathological condition, and is almost always present. When I find that opaque secretion of the cervix, that peculiar hue of the cervix and vagina, and the other physical signs, I am more positive of the diagnosis in the early months of pregnancy than in the fourth or fifth month, when fœtal motion is present, but, on account of a fatty abdomen, is hard to distinguish.—*American Lancet.*

AN UNUSUAL INTESTINAL CONCRETION.—A case of a large concretion having become lodged in the cæcum, has just been recorded by a French practitioner. The patient, a woman, had for a long time suffered from chronic intestinal catarrh, and after death the cæcum was found to be occupied with a large greyish mass, which readily broke down under pressure. On further examination the mass was found to consist of 85 per cent. of subnitrate of bismuth, together with 15 per cent. of organic matter. The presence of the bismuth salt was easily explained by the fact that the patient had, for a long time before her death, been accustomed to take large quantities of it.—*Medical Press.*

MICHAEL SMITH, of Iowa, his wife and eight children, were poisoned by eating beef affected with lumpy jaw. The mother and one boy are still very sick and may die, but the others are out of danger.

UTERINE DRAINAGE.—Dr. W. Gill Wylie says (*Ann. Gyn. and Ped.*), that to sum up: if a patient comes to you, try, if possible, to make a complete diagnosis; differentiate the cases which are complicated by diseases of the tubes and ovaries from those which are not; if there is no disease of the appendages, you will be justified in using clean instruments, clean hands, and having the vagina clean, in examining the uterus with a sound. If the touch of the sound causes bleeding or pain, or if the uterus is enlarged, and remains enlarged after boro-glyceride treatment and improved pelvic circulation, then divulse, scrape, drain, and make a simple application. Never use anything which is really destructive of the mucous membrane, or which will leave a scar. Recollect that the uterus is filled with glands and follicles, which are deep-seated in its tissues, so that any escharotic, any caustic, any electric current, which may cause destruction of the mucous membrane, will leave a scar, and do more harm, in the course of time, than good. Although you may cure the acute symptoms by burning out the uterine cavity, yet the after-results from stopping up the mouths of the glands and follicles will do more harm than any possible good. But if you will treat the chronically diseased uterus as you would treat a sinus, and keep up drainage, you will get satisfactory results.

PATENT MEDICINES AND THE LAY "PRESS."—At the annual meeting of the Canadian Press Association, held in Ottawa, March 3 and 4, Dr. Playter brought before the meeting the subject of patent medicines and cure-all advertisements. Why, the doctor said, should the general press insert such advertisements any more than the medical press? Patent medicines did an incalculable amount of harm, promoted intemperance and disease, misleading the people until it was too late in many instances, disease having progressed too far for medical skill to apply successful remedies. The most excruciating of all pains, especially to most readers of papers, was "Paine's Celery Compound." The press was a powerful educator, a great power for good or for ill. The time would surely come when this practice of the press would be abandoned. Dr. Playter asked for a committee to be appointed by the President to report on the subject at the next meeting of the Association. The President referred the question to the Executive Committee, and said the Association would be glad to have a paper on the subject from the doctor at the next meeting. Dr. Playter intends to give a paper on it, and to press for more discrimination in regard to the advertising of such nostrums.—*The Canadian Practitioner.*

DARWINISM SO FAR A FAILURE.—Darwinism has a strong foe in Professor Virchow. The following is an extract from his address on the subject delivered before the Anthropological Congress in Vienna: "Since the Darwinian theory of the origin of man made its first victorious mark, twenty years ago, we have sought for the intermediate stages which were supposed to connect man with the ape. The proto-man, the *pro-anthropos*, is not yet discovered. For anthropological science the *pro-anthropos* is even a subject of discussion. At that time in Innspruck the prospect was, apparently, that the course of descent from ape to man would be reconstructed all at once; but now we cannot even prove the descent of the separate races from one another. At this moment we are able to say that among the peoples of antiquity, no single one was any nearer to the apes than we are. At this moment I can affirm that there is not upon earth any absolutely unknown race of men. The least known of all are the peoples of the central mountainous districts of the Malay Peninsula, but otherwise we know the people of Terra del Fuego quite as well as the Esquimaux, Bashkirs, Polynesians and Lapps. Nay, we know more of many of these races than we do of certain European tribes; I need only mention the Albanians. Every living race is still human; no single one has yet been found that we can designate as simian or quasi-simian. Even when in certain ones phenomena appear which are characteristic of the apes—*e. g.*, the peculiar ape-like projections of the skull in certain races—still we cannot say that these men are ape-like."—*The Sanitarian.*

THE cultivation of the erythroxylon coca has been introduced into Hindostan. It grows like a weed in Madras, and the leaves are said to yield a cocaine fully equal to that obtained from the American coca.—*The Canadian Practitioner.*

THE WAR AGAINST QUACKERY, in Louisville, is just now being vigorously pursued by the State Board of Health through its able secretary. Some notorious quacks have been forced to quit the field, and it is only a question of time when the city, as well as the State, will be purged of these getters of money under false pretenses.—*Medical Record.*

To Dissolve Cocaine.—Squibb recommends the use of a half of 1 per cent. solution of boric acid to dissolve cocaine, this amount being needed to prevent decomposition.

Prof. Parvin does not believe that properly applied *pessaries* ever produce cancer. If cancer does follow the use of them, *they* are not the cause of the disease, but the condition must have already existed in the patient.—*Canada Lancet.*

Salicylate of Soda in Gonorrhœal Inflammation about the Neck of the Bladder.—Dr. Meynier has found the drug to be of notable value in these cases, given in hourly doses, amounting at first to a daily dose of 6 grams, if needful increased to 10 grams daily. Commonly symptoms abate after the second day; and when good result follows, the dose must be gradually decreased till 3 grams daily are given; this dose is continued till risk of recurrence seems gone. The drug fails in relieving the same affection in its chronic stage.—*Archives de Méd. Militaire.*

"L'Estomac et le Corset."—Dr. Chapotot, in a recent essay published by Baillière under this title, gives a fair summary of the opinions of experts such as Bouvier, Dickinson, Sibson, and others, on the real and imaginary evils attributed to the constriction of the waist. The question of the true position of the stomach is very important in respect to the correct interpretation of abnormal relations of the abdominal viscera detected after death. The most original portion of Dr. Chapotot's essay refers to a matter of some interest to ladies. Young women have often reason to complain of disagreeable noises caused by air moving about in the epigastric region. Our author attributes these noises, which differ from borborygmi, to a vertical bilobulation of the stomach caused by the pressure of stays. During expiration the upper lobe is relieved of pressure by the ascent of the diaphragm. The lower lobe is, on the other hand, subjected to great pressure from the abdominal muscles. Hence, air and liquids are forced upwards into the upper lobe through the narrow isthmus produced by the pressure of the stays; as they pass through the isthmus and issue out of it, the characteristic gurgling sound is produced. If the stays be taken off the sounds are no longer heard, but they may be reproduced by applying any other form of restriction to the abdomen at the same level.—*British Medical Journal.*

The Origin of Eczema.—Brocq, after tracing in an exhaustive manner the various views which have been and are held as to the nature of eczema, or of the eczematous processes, for he regards it as complex, concludes by the following remarks. From true eczema must be separated:—1. The cutaneous lesions apparently eczematous, caused by various irritants, which are nothing more than traumatic inflammations of the skin, such as those caused by animal parasites, as acari or pediculi; 2. Impetigo; 3. Dysidrosis; 4. Chronic lichen simplex. We designate under the term eczemas, dermatoses of *apparently* spontaneous origin, or developing as the result of a cause of an occasional nature, in itself insufficient to determine the eruption, objectively characterized by a more or less accentuated inflammation of the skin, that is to say by redness, infiltration, sometimes by vesiculation and oozing of a serous fluid which stiffens linen, finally by desquamation of the epidermis. It cannot be too often repeated that such is not a well-defined disease, rather a non-homogenous group reunited by a common objective bond—their eczematous aspect. It is possible that these various dermatoses own different causes, thus explaining up to a certain point the divergences of opinion current as to the etiology of eczema. Still, one must combine the two great theories which consist in regarding eczema either as the external manifestation of a general condition, or as a purely local disorder. It is certain that the recent idea of Unna as to parasitic eczema best explains the majority of cases. By interposing the question of soil, one can understand how eczema develops by preference in certain constitutions, how by modifying the diet, by favoring the nutritive changes, the disease may at times vanish, since the soil is thus rendered unsuitable for the growth of the parasite. In admitting the theory of revulsion, this explains, *up to a certain point*, how it is possible that a cutaneous lesion of external origin may sometimes replace various visceral manifestations. The importance and success of local treatment is thus explained. Still, it is difficult to account for, on this hypothesis, all the cases which have been grouped under the name of eczemas. With respect to the pathogenic organism, if it exists, it is necessary to know if it is present under normal conditions of the skin, if it is a common parasite which becomes offensive in certain particular cases, which is likely, or if it is an accidental parasite. This point is one of primary importance, since on its solution hangs the question of the contagiousness or transmissibility of parasitic eczemas. In fact, if their parasites are common parasites, these affections cannot be looked on as contagious, each person creates his eczema without the least foreign intervention. If, on the contrary, these parasites are accidental, these diseases only require for their production the deposition of the special morbid germ on prepared soil, and thus an eczematous individual is possibly dangerous to one predisposed to eczema. Such hypotheses, however attractive, cannot be accepted definitely till the part played by parasitism in eczema has been scientifically and strictly determined; till then we must hold to the belief that the general condition plays a considerable part in the genesis of these complaints. And conversely, by arguments which are irrefutable, since they are based on facts, that local treatment is of the utmost importance.—*La Semaine Médical.*

A Wise Determination.—Koch has written to a Swedish physician that he will not sell nor describe his improved tuberculin until he shall have tested it in private beyond all chance of doubt.—*Medical Record.*

NECROLOGY.

Minute on the Death of Dr. D. Hayes Agnew.

The following minute was adopted by the College of Physicians of Philadelphia, March 24, 1892:

"The death of Dr. D. Hayes Agnew, recently President of the College, in the seventy-fourth year of his age, and after a life crowned with honor and usefulness, calls for an expression of the sense entertained by the College of the gravity of the loss which it suffers, in common with the profession he adorned, the charitable institutions he served, and the community in which his skill did so much to lessen suffering and death.

"He began his professional life with no adventitious aids; yet by incessant industry, indomitable perseverance, and singleness of purpose, he attained to its highest rank. No temptation distracted his attention from the goal of his life; neither extraneous science, nor general literature, nor the allurements of art, nor the pleasures of society.

"The undivided strength of his mind and his affections was devoted to enlarging the domain of surgery, not only in its operative methods—which he always subordinated to the welfare of his patients—but also in preparing for his profession a literary monument that might speak for him when his voice should be no longer heard.

"His minute acquaintance with anatomy, and his ambi-

dextrous skill, enabled him to perform, with ease to himself and safety to his patients, operations which less accomplished surgeons hesitated to undertake.

"He possessed a certain magnetism of manner, quite independent of formality, that evidently proceeded from the heart, and drew all hearts to himself. Never frivolous, but always cheerful, he was dignified, grave and earnest, making all who heard him as a teacher and speaker, or in familiar intercourse, recognize in him, above all other things, the upright man. For he possessed eloquence of conviction and the force of absolute honesty in all his statements, and thereby drew to himself, as enthusiastic admirers and disciples, the successive classes of students whom he taught.

"The College, desiring to show respect for the purity, uprightness, unselfishness and modesty of Dr. Agnew's character; its admiration for the noble example of his life; and its sense of the value of his contributions to the science and art of surgery, directs that this minute shall be duly recorded, and a copy of it, signed by the President and Secretary, be conveyed to Dr. Agnew's family. Also, that the College will attend the funeral in a body, and that the President be requested to appoint a Fellow to prepare a memoir of our late colleague."

CHARLES W. DULLES, M.D., Sec'y.

BOOK REVIEWS.

DISEASES OF THE BLADDER AND PROSTATE, by HAL. C. WYMAN, M. Sc., M.D., Professor of Surgery Michigan College of Medicine and Surgery, etc., etc. Detroit. 1891. George S. Davis. pp. 130, paper.

This little volume commences with an anatomical description of the bladder, and the methods of examination. Chapter two is devoted to a consideration of the prevention of shock during and after operations upon the bladder and prostate. Chapter three discusses deformities and wounds of the bladder. Chapter four, ruptures and tumors. Chapter five, neuralgia of the bladder. Chapter six treats of lithotrity and cystotomy. Chapter seven of acute and chronic cystitis. Chapter eight of calculi, and chapter nine of prostatic concretions. The book is carefully written, and well worth perusal.

SURGICAL ANATOMY FOR STUDENTS. By A. MARMADUKE SHIELD, M.B., F.R.C.S. 8 vo., cloth, pp. 226. New York: D. Appleton & Co. Chicago: A. C. McClurg & Company. Price $1.75.

"This work" as we are informed by our author, contains the substance of a series of demonstrations delivered by himself to students in course of preparation for final examinations. It is also intended to be used with the living model, and an inspection shows that it fairly meets the indication. There are no illustrations, but the author's directions are so clear that one can map out on the surface of the living model the exact location of the structures lying underneath.

There cannot be too many books on topographical anatomy, any more than there can be too much study of practical anatomy, and this book will therefore be a welcome addition to many shelves whereon there are already many anatomical works, but none written with more precision and accuracy.

MISCELLANY.

THE Hungarian State Health Commissioner in a report to the Minister of the Interior (Pharm. Post Vienna, Nov. 10, 1892) stated that in the treatment of influenza, no specific was known but each case required individual treatment. Concerning the use of antipyretics, such as antipyrine and phenacetine, it appeared that the latter especially gave good results, while a portion of the patients were favorably affected by salipyrine.

REGISTER BY MAIL. NOTICE TO ASSOCIATION MEMBERS AND DELEGATES.—The Registration Committee wishes to give notice to all who expect to attend the ensuing meeting at Detroit, that those who desire to do so can register by mail. The Committee will send to each member of the Association, within a short time, the proper blanks, and earnestly desires that as many members as possible will forward to the Committee their credentials and fees *in advance of the meeting*. By this means we expect to lessen very greatly the annoyance which the members always experience in waiting in a great crowd around the registration clerks. Those who register thus, by mail, will save themselves all delay and annoyance. Think it over, and when you receive your blanks, sit right down, fill them out, enclose your fee and send it right on to the Committee.

DAVID INGLIS, Chairman,
21 State St., Detroit, Mich.

NEW CHAIRS AND PROFESSORS AT THE JEFFERSON MEDICAL COLLEGE.—The Board of Trustees of the Jefferson Medical College, at their meeting April 7, 1892, instituted a Chair of Clinical Gynecology, with a seat in the Faculty, and elected to the new chair Dr. E. E. Montgomery, who has been for a number of years Professor of Gynecology in the Medico-Chirurgical College. They also established the following Clinical Professorships, electing Dr. F. X. Dercum, Professor of Nervous Diseases; Dr. E. E. Graham, Professor of Children's Diseases; Dr. H. Augustus Wilson, Professor of Orthopædic Surgery; Dr. H. W. Stelwagon, Professor of Dermatology; and Dr. W. M. L. Coplin, Adjunct Professor of Hygiene.

NEW YORK ACADEMY OF ANTHROPOLOGY, COLUMBUS MEMORIAL MEETING.—The members of the American Medical Association, with their ladies, are cordially invited to attend a meeting of this Academy at Columbia College, New York city, at eight o'clock P.M., on Tuesday, April 19, to celebrate the 400th Anniversary of the Great Historic Epoch in the life of Columbus—the treaty and capitulation of Ferdinand, Isabella and Columbus, of April 1492, which led to the discovery of America. General James Grant Wilson will deliver the address on Columbus, General Darling, of Utica, the address on Isabella and Will Carleton will read an original poem entitled "The Voyage of Columbus." Papers are expected from Spain and Portugal.

EDWARD C. MANN, M.D., F.S.S., President.

A GERMAN EDITION, of the second revision of Gower's book on the nervous system, has just been published by Cohen, of Bonn, and an Italian translation is nearly ready.

OFFICIAL LIST OF CHANGES in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from April 2, 1892, to April 9, 1892.

Major Albert Hartsuff, Surgeon U. S. A., granted leave of absence for six months, to take effect on or about July 10, 1892, with permission to go beyond the sea, and to appl for an extension of two months.

First Lieut. Alfred E. Bradley, Asst. Surgeon U. S. A., ordered to Columbus Bks., O., for temporary duty at that station, during the illness of Capt. Augustus A. De Loffre, Asst. Surgeon U. S. A.

First Lieut. William E. Purviance, Asst. Surgeon U. S. A. (recently appointed), will proceed from Rossville, Ill., to Ft. Riley, Kan., and report for duty at that station.

OFFICIAL LIST OF CHANGES in the Medical Corps of the U. S. Navy, for the Week Ending April 9, 1892.

J. Mills Browne, reappointed Chief of Bureau and Surgeon-General, U. S. N.

J. C. Boyd, detailed as Assistant to the Bureau of Medicine and Surgery.

Asst. Surgeon M. W. Barnum, ordered to the Naval Hospital, Washington, D. C.

Surgeon Howard Smith, granted leave of absence for six months, with permission to leave the United States.

Champ Carter McCullough, commissioned an Asst. Surgeon in the Navy.